

Service Manual

Convertible Camera AW-E600E



(Lens : Optional accessory)

SPECIFICATIONS

Pickup element :	1/2" interline, supersensitive CCDx3
Pixels :	752 (H) x 582 (V) pixels
Scanning :	2:1 interlace
System :	PAL
Scanning frequency :	15.625 kHz (horizontal), 50.00 Hz (vertical)
Lens mount :	1/2" Standard byonet mount
Synchronizing :	Internal or external
External sync input :	BBS, (BNC, 50P D-sub connector)
Sensitivity :	2 000 lx, F11, 3 200 K
Minimum illumination :	0.25 lx, F1.4, Night Eye HIGH mode
Signal-to-noise ratio :	65 dB (DNR ON)
Horizontal resolution :	850 TV lines (high band, DTL ON)
Registration :	0.05 %
Contour correction :	Horizontal and vertical
White balance :	Auto (2 memories), 3 200 K, 5 600 K, FINE MANU, ATW
Black balance :	AUTO
Colour bar :	Full colour bar (Setup 0)
Shutter speed :	Synchro Scan: 60.34 Hz-15.75 kHz Step shutter: OFF 1/120s, 1/250s, 1/500s, 1/1 000s, 1/2 000s, 1/4 000s, 1/10 000s, ELC AGC LOW/HIGH, 0 - 30 dB, Night Eye LOW/HIGH
Gain :	AUTO, MANU
Iris :	Composite: 1 V[p-p] (75 Ω) (BNC, 50P D-sub connector) Y: 1 V[p-p] (75 Ω) (50P D-sub connector) C: Same as VBS chroma level (75 Ω) (50P D-sub connector)
Video output :	Halogen, Fluorescent, Outdoor, User BACK PANEL: MENU, ITEM/AWC, YES/ABC, NO/BAR MENU ITEM SETTING: Gain, Shutter, White Balance, Detail Level (OFF/LOW/HIGH), Corner Detail, Precision Detail Level, Black Stretch, High Light Chroma, Flesh Detail, Photometric Measurement Method (ALL/CENTRE/TOP CUT/BOTTOM CUT/R/L CUT) CCD Read Out Mode (FIELD/FRAME 1/FRAME 2) Clean DNR, Use Mode, Nega/Posi, PC Control Access Speed
Use mode :	
Switches :	

Panasonic

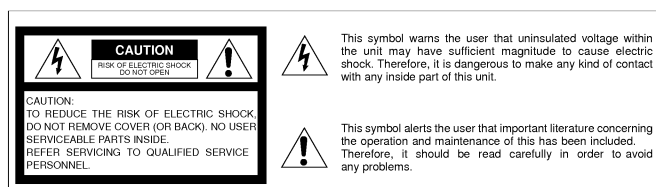
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WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.



IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are indicated by the "△" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

Adjustment function :

MENU ADJUSTMENT: R/B Gain, R/B Pedestal, Black Level, Video Level, Detecting Ratio, Genlock Horizontal Phase/Colour Phase, Gamma Compensation Level, Knee Compensation Level, White Clip Level, Horizontal Detail Level, Vertical Detail Level, Noise Suppress Compensation Level, Level Dependent Compensation Level, Chroma Detail Compensation Level, Dark Detail Compensation Level, Matrix Compensation Level, Flare Correction Level, Synchroscan

Source voltage :

DC 12 V

Power consumption :

9.6 W

Operating temperature :

−10°C to +45°C (14°F to +113°F)

Operating humidity :

30 % to 90 %

Dimensions :

84 (W) x 77 (H) x 155 (D) mm [3-5/16" x 3-1/32" x 6-3/32"]

Weight :

0.86 kg

Finish :

AV ivory painting (Munsell 7.9Y 6.8/0.8 or equivalent)

Weight and dimensions indicated are approximate.

Specifications are subject to change without notice. Specifications are subject to change without notice.

STANDARD ACCESSORIES

Body cap 1

Rubber Sheet 1

OPTIONAL ACCESSORIES

Pan/Tilt Unit	AW-PH300	Studio Cable	WV-CA26U15
Pan/Tilt Unit AC Adaptor	AW-PS300		WV-CA26U30
Hybrid Control Panel	AW-RP501		WV-CA26U100
Multi Hybrid Control Panel	AW-RP505	Cable Joint Adaptor	WV-CA26T26
Multi Port Hub	AW-HB505	RCB Cable	AW-CA50T10
Control Panel AC Adaptor	AW-PS301	RCU Cable	AW-CA50A26
AC Adaptor	AW-PS505	Pan/Tilt Unit Cable	AW-CA50T15
Remote Control Unit	WV-RC700A	PC Control Camera Pan/Tilt Unit Cable	AW-CA50A15
	WV-RC550	PC Control Pan/Tilt Unit Cable	AW-CA28T9
Remote Control Box	WV-CB700A	PC Control Cable	AW-CA50T9
Camera Mounting Bracket	WV-831	DC Power Cable	AW-CA4T1
RCU Rack Mount Frame	WV-Q70	RGB Cable	AW-CA50T6
VF Mounting Bracket	AW-Q40	Studio Card	
Connection Cable	WV-CA9T5	(RGB, YPr-YPb Outputs)	AW-PB301E
	(D sub9p-BNC, approx. 5 m)	Studio Card	AW-PB305E
		RGB Card	AW-PB302E
		1/2" Byonet Zoom Lens (14X)	AW-S14XBMD

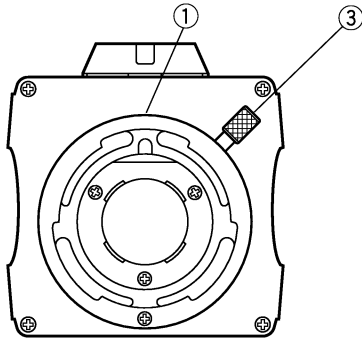
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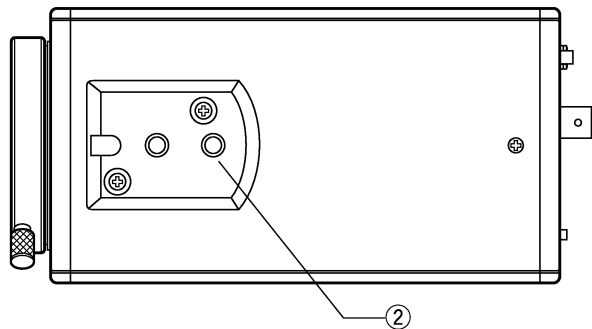
For the Optional Cards AW-PB301E, AW-PB302E and AW-PB305E, please refer to the Service Manual of the AW-E300E, an ORDER NO. BSD9901054C8.

MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

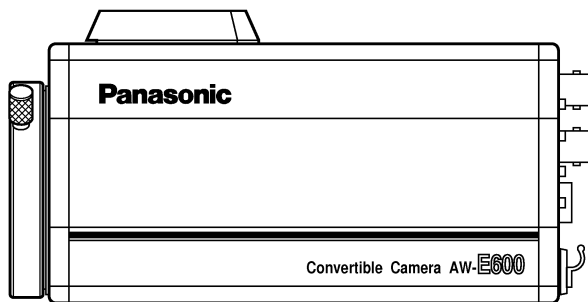
<Front View>



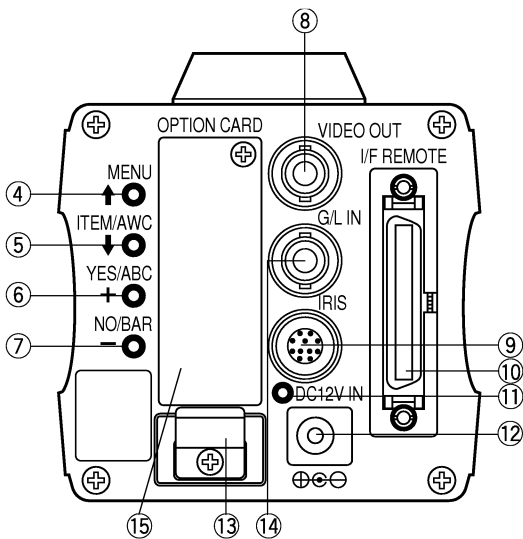
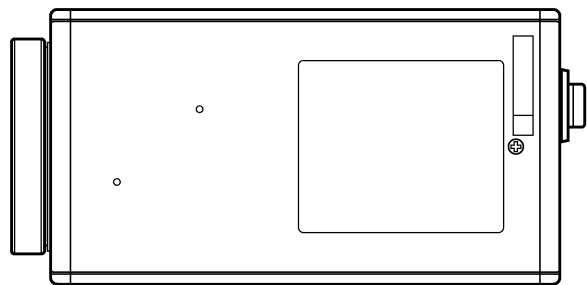
<Top View>



<Side View>



<Bottom View>



1. Lens Mount

1/2" Standard bayonet type lens or a microscope adaptor can be mounted.

2. Mounting Adaptor

A screw hole (1/4" - 20 UNC) adaptor for mounting the camera on a wall, ceiling with a mounting bracket or tripod.

3. Lens fixing ring knob

Rotate the lens fixing ring knob counterclockwise and remove the lens mount cap. Mount the lens on the camera and rotate the lens fixing ring knob clockwise in order to fix the lens securely.

4. MENU Switch (MENU/↑)

A menu will appear on the monitor screen when this switch is pressed for about 5 seconds. This item can be selected by pressing the switch while the menu is on the screen.

5. ITEM/AWC Switch (ITEM/AWC/↓)

The item just below can be selected by pressing this switch while the menu is on the screen. When the menu is not displayed or the camera is in shooting mode, the automatic white balance control can be set with this switch.

6. YES/ABC Switch (YES/ABC/+)

The Sub Menu for each item of the Main Menu is displayed when this switch is pressed while the Main Menu is on the screen.

While the Sub Menu is displayed, any setting can be brought up to a higher value with this switch. When the menu is not displayed or the camera is in shooting mode, the automatic black balance control can be set with this switch.

7. NO/BAR Switch (NO/BAR/-)

The item just below can be selected by pressing this switch while the Main Menu is on the screen.

While the Sub Menu is displayed any setting can be brought down to a lower value with this switch. When the menu is not displayed or the camera is in shooting mode, the colour bar and the shooting conditions are alternately indicated by pressing the switch.

8. Video Output Connector (VIDEO OUT)

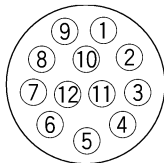
A composite video signal is provided at this connector.

9. Iris Connector (IRIS)

Input terminal for lens with an iris control function.

Pin No.	Signal	Pin No.	Signal
1	Return Control	7	Iris Follow
2	Not Used	8	Auto/Remote Control
3	GND	9	Not Used
4	Auto/Manual Control	10	Not Used
5	Iris Control	11	Not Used
6	Lens Power	12	Not Used

Iris Connector (IRIS)



<Front View>

10. I/F Remote Connector (I/F REMOTE)

Input terminal dedicated to control signals from the optional Remote Control Box (RCB) (WV-CB700A) and the RCU (WV-RC700A, WV-RC550) and the camera pan/tilt unit (AW-PH300).

- * WV-CB700A is connected through the optional RCB cable (AW-CA50T10).
- * WV-RC700A/WV-RC550 is connected through the optional RCU cable (AW-CA50A26).
- * AW-PH300 is connected through the optional pan/ tilt unit cable (AW-CA50T15).

11. Power Indicator

Red LED lamp lights to indicate that the specified DC power is supplied to the camera.

12. DC 12 V Input Connector (DC 12V IN)

12 V DC is supplied through the optional DC power supply cable (AW-CA4T1).



13. Cable Clamp

Clamp the DC Power Supply Cable (AW-CA4T1) connected to the DC 12 V Input Connector to prevent it from slipping out.

14. G/L Input Connector (G/L IN)

Signals synchronized with the reference signal are to be supplied to this connector when the camera is to be synchronized with the reference signal BBS.

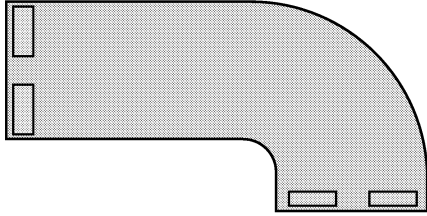
15. Optional Card Slot

Slot for inserting an optional card. For details, refer to the manual for optional cards.

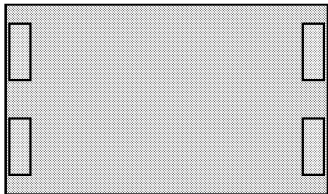
ADJUSTMENT PROCEDURE

1. Test Equipment Required

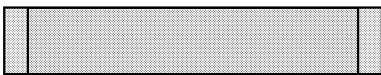
- The following test Equipments are required for adjustment of the Convertible Camera AW-E600E.
- Oscilloscope
- Frequency Counter
- Digital Voltmeter
- Vectorscope
- Waveform Monitor
- Underscanned Colour Video Monitor
- Signal Generator
- 12 V DC Power Supply Unit
- Lux Meter
- Lighting (200 footcandles (2,000 lx), Colour Temperature 3,200 K)
- Auto Iris Lens (1/2" Bayonet-Mount)
- Camera Cables AW-CA50T6
- Remote Control Box (WV-CB700A)
- 1/2 ND Filter (2 pieces)
- RCB Cable (AW-CA50T10)
- Logarithmic Gray Scale Chart (Part No. : YWV2310RB99)
- Extension Board between Joint Board and Preprocess or DSP/Encoder Board (Part No. : 0E1A020A)



- Extension Board between Power Board and Option Card (Part No. : 0E1A021A)



- Extension Board between Joint Board and Preamp. Board (Part No. : 0E1A036A)



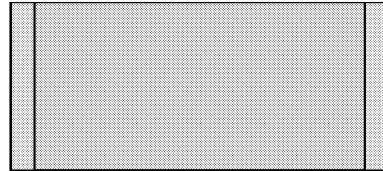
- Extension Board between Joint Board and Drive Board (Part No. : 0E1A037A)



- Extension Board between CCD and Preamp. Board (Part No. : 0E1A038A)



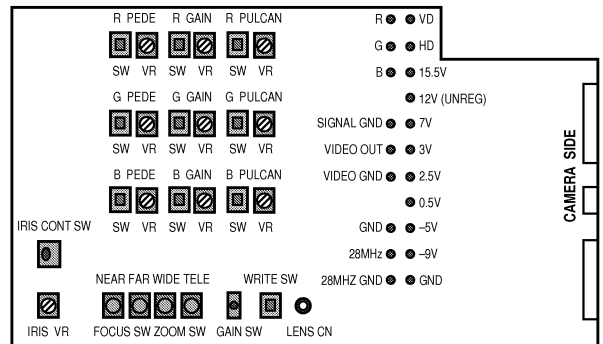
- Extension Board between CCD and Drive Board (Part No. : 0E1A039A)



- Extension Board between Joint Board and Preamp. Board (Part No. : 0E1A040A)



- Manual Adjustment Card (Part No. : 0E1A022A)



2. Disassembling Procedure for Adjustment

- Referring to Fig. 2-1, remove four screws that secure the Rear Panel and remove the Rear Panel.

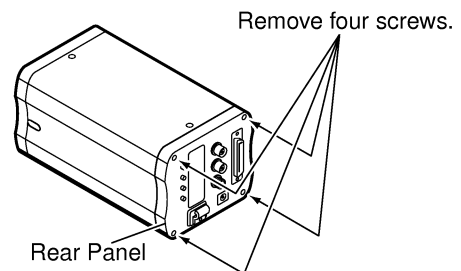


Fig. 2-1

3. Connection and Setting Up for Adjustment

3.1. Connection

- The Fig. 3-1 shows the connection diagram for the adjustment procedure.

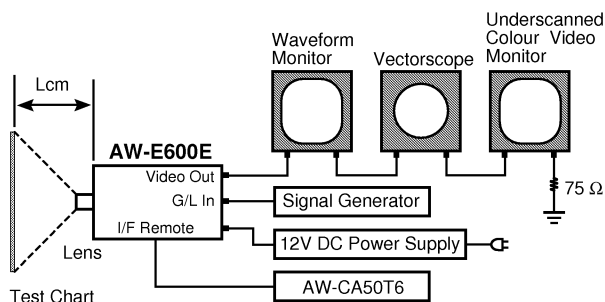


Fig. 3-1

- Connect the Underscanned Colour Video Monitor to the Video Output Connector on the Rear Panel of the Convertible Camera AW-E600E through the Waveform Monitor and the Vectorscope.
- Terminate the input terminal of the Underscanned Colour Video Monitor with 75 Ω .
- Mount the Auto Iris Lens to the AW-E600E.
- Connect the Power Supply Unit to the DC 12 V Input Connector on the Rear Panel of the AW-E600E.
- For the Optional Card AW-PB301 and AW-PB302, connect the AW-CA50T6 to the I/F Remote Connector on the Rear Panel of the AW-E600E.
- Terminate the Connectors of the AW-CA50T6 with 75 Ω .
- Connect the probe of the Digital Voltmeter, Oscilloscope or Frequency Counter at the desired Test Point in each adjustment step.

3.2. Setting Up for Standard Picture

- The adjustment should be done after 10 minutes warm-up.
- Set the Logarithmic Gray Scale Chart.
- Incident light of $2,000 \pm 50$ lx on the Logarithmic Gray Scale Chart.
- Aim the Camera at the Logarithmic Gray Scale Chart.
- Set the Camera so that the Logarithmic Gray Scale Chart becomes full picture on the Underscanned Colour Video Monitor.
- Connect the Oscilloscope to E301 (G-IN) on the Preamp. Board.
- Adjust the Lens Focus to obtain correct focal point.

- Set the Lens Iris so that the peak level of the Gray Scale from the Blanking level becomes 200 mVp-p as shown in Fig. 3-2.

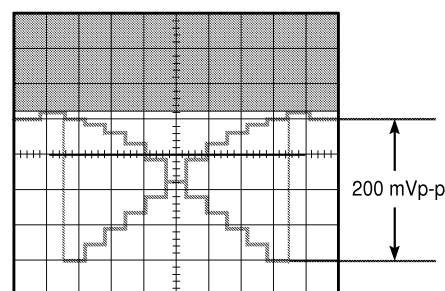


Fig. 3-2

- The adjustments should be done with this Standard Picture, unless otherwise specified.

4. Adjustment Procedure

- Refer to the Location of the Test Points and Adjusting Controls on the page 8.

(1). Internal Frequency Adjustment

Test Point: TP2 (INT 8FSC) **DSP/Encoder Board**

Adjust: R283 (INT 8FSC) **DSP/Encoder Board**

- Connect the Frequency Counter to TP2.
- Adjust R283 so that Internal Frequency becomes $28.375 \text{ MHz} \pm 10 \text{ Hz}$.

(2). Preamp. DC Voltage Adjustment

Test Point:	E301 (G-IN)	Preamp. Board
	E303 (G)	Preamp. Board
	E103 (B)	Preamp. Board
	E503 (R)	Preamp. Board
Adjust:	R327 (G-DC1)	Preamp. Board
	R127 (R-DC1)	Preamp. Board
	R527 (B-DC1)	Preamp. Board

- Connect the Oscilloscope to E301.
- Adjust the Lens Focus to obtain correct focal point.
- Set the Lens Iris so that the peak level of the Gray Scale from the Blanking level becomes 200 mVp-p as shown in Fig. 4-1.
- Change the connection of the Oscilloscope to E303.
- Adjust R327 so that the DC Voltage at E303 becomes 1.3 V DC as shown in Fig. 4-1.
- Change the connection of the Oscilloscope to E103.
- Adjust R127 so that the DC Voltage at E103 becomes 1.3 V DC as shown in Fig. 4-1.
- Change the connection of the Oscilloscope to E503.

- Adjust R527 so that the DC Voltage at E503 becomes 1.3 V DC as shown in Fig. 4-1.

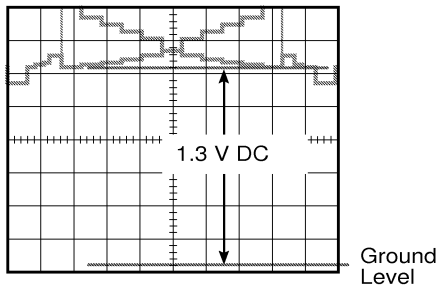


Fig. 4-1

(3). Preamp. Output Gain Adjustment

Test Point:	E301 (G-IN)	Preamp. Board
	E201 (G-IN)	Preprocess Board
	E301 (B-IN)	Preprocess Board
	E101 (R-IN)	Preprocess Board
Adjust:	R355 (G-GAIN)	Preamp. Board
	R363 (G-DC2)	Preamp. Board
	R155 (B-GAIN)	Preamp. Board
	R163 (B-DC2)	Preamp. Board
	R555 (R-GAIN)	Preamp. Board
	R563 (R-DC2)	Preamp. Board

- Connect the Oscilloscope to E301 on the Preamp. Board.
- Adjust the Lens Focus to obtain correct focal point.
- Set the Lens Iris so that the peak level of the Gray Scale from the Blanking level becomes 200 mVp-p as shown in Fig. 4-2.

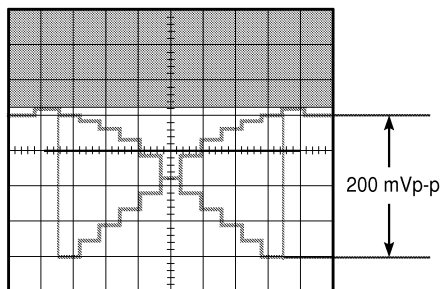


Fig. 4-2

- Change the connection of the Oscilloscope to E201 on the Preprocess Board.
- Adjust R355 so that the Gch Signal level at E201 becomes 300 mV as shown in Fig 4-3.
- Set the Oscilloscope to the DC mode.
- Adjust R363 so that the Gch DC Voltage at E201 becomes 100 mV DC as shown in Fig 4-3.

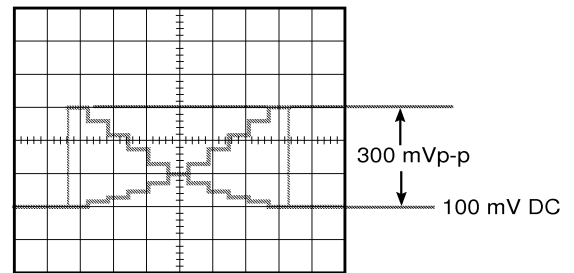


Fig. 4-3

- Change the connection of the Oscilloscope to E301 on the Preprocess Board.
- Adjust R155 so that the Bch Signal level at E301 becomes 300 mV as shown in Fig 4-4.
- Set the Oscilloscope to the DC mode.
- Adjust R163 so that the Bch DC Voltage at E301 becomes 300 mV DC as shown in Fig 4-4.

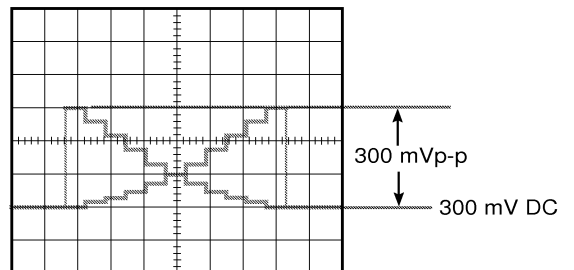


Fig. 4-4

- Change the connection of the Oscilloscope to E101 on the Preprocess Board.
- Adjust R555 so that the Rch Signal level at E101 becomes 300 mV as shown in Fig 4-3.
- Set the Oscilloscope to the DC mode.
- Adjust R563 so that the Rch DC Voltage at E101 becomes 100 mV DC as shown in Fig 4-3.

(4). White Clip Adjustment

Test Point:	E101 (R-IN)	Preprocess Board
	E201 (G-IN)	Preprocess Board
	E301 (B-IN)	Preprocess Board
Adjust:	R701 (G-WCLP)	Preamp.-Sub Board
	R705 (R-WCLP)	Preamp.-Sub Board
	R707 (B-WCLP)	Preamp.-Sub Board

- Observe at E101, E201 and E301 by the Oscilloscope.
- Turn R701, R705 and R707 so that the signals are not clipped.
- Aim the Logarithmic Gray Scale Chart.
- Set the Lens Iris by two digit to open direction.
- Connect CH1 of the Oscilloscope to E201 and CH2 of the Oscilloscope to E101.

- Adjust R701 so that signal level at E201 becomes clip at 1.2 Vp-p as shown in Fig. 4-5.

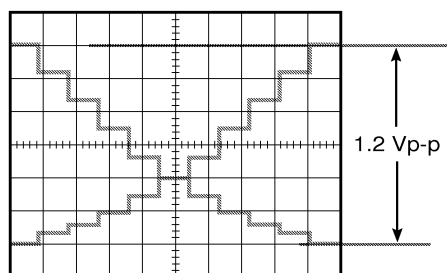


Fig. 4-5

- Adjust R705 so that signal level at E101 becomes coincides at signal level at E201 as shown in Fig. 4-6.
- Change the connection of the CH2 of the Oscilloscope to E301 on the Preprocess Board.
- Adjust R707 so that signal level at E301 becomes coincides at signal level at E201 as shown in Fig. 4-6.

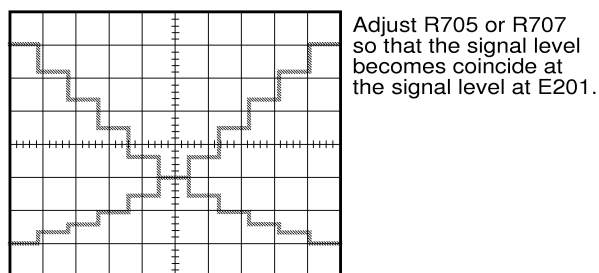


Fig. 4-6

(5). Automatic Adjustment

Test Point: E201 (G-IN) Preprocess Board

- Set the Lens Iris to the Automatic side.
- Turn the power ON while pressing the ITEM/AWC Switch YES/ABC Switch and No/BAR Switch on the Rear Panel of the AW-E600E.
- The Automatic Adjustment Menu is displayed, set the Lens Iris to the Manual side.
- Connect the Oscilloscope to E201 on the Preprocess Board.
- Set the Lens Iris so that the peak level of the Gray Scale from the Blanking level becomes 300 mVp-p as shown in Fig. 4-3.
- Press the YES/ABC Switch.
- Move to the Automatic Adjustment Item by the Item/AWC Switch.
- Set the Lens Iris to the Automatic side.
- Press the YES/ABC Switch, and confirm that the Automatic Adjustment should be finished and displayed "OK".
- Turn the power OFF and ON again so that the Camera return to the Normal mode.

(6).1. Manual Blemish Concealment and Correction

Test Point: Video Output Connector Rear Panel
Adjust: PAGE Button Remote Control Box
ITEM Button Remote Control Box
UP Button Remote Control Box
DOWN Button Remote Control Box

- Set the Colour Bar Switch of the Remote Control Box to the Camera side.
- Turn the power ON while pressing the ITEM/AWC Switch and No/BAR Switch on the Rear Panel of the AW-E600E.
- The Menu will be displayed as shown Fig. 4-7 after execute the Scratch Compensation Mode.

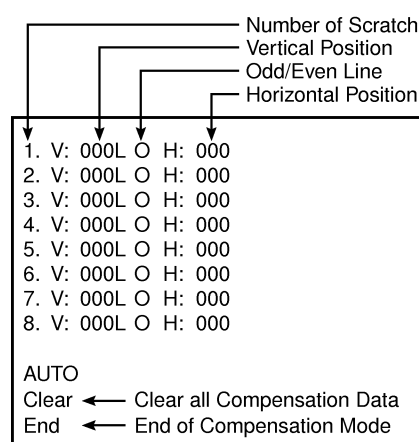


Fig. 4-7

- Move the Character Blink to be compensated Scratch Number, and set the Colour Bar Switch to the Bar side, the Scratch Compensation Cursors will be displayed on the Monitor as shown in Fig. 4-8.

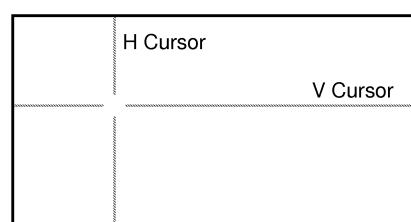


Fig. 4-8

Note : The Cursors are not displayed when the vertical and horizontal coordinate have been (0,0) because of out of effective picture field.

- Operate the cursor position by the PAGE, ITEM, UP and DOWN Buttons of the Remote Control Box.
- The scratch has been eliminated when coincide the cursors intersection and scratch position.
- Set the Colour Bar Switch of the Remote Control Box to the Camera side.

- For next scratch, move the Character Blink to be compensated Scratch Number, and set the Colour Bar Switch to the Bar side.
- Operate the cursor position by the PAGE, ITEM, UP and DOWN Buttons of the Remote Control Box.
- The scratch has been eliminated when coincide the cursors intersection and scratch position.
- The maximum Compensated Scratch Numbers are eight.
- After completion of compensation, move the character blink to "End" position and press the UP Button.

(6).2. Automatic Blemish Concealment and Correction

Test Point: Video Output Connector Rear Panel

- Mount the Lens and set the Lens Iris to " AUTO " direction.
- Turn the power ON while pressing the ITEM/AWC Switch and No/BAR Switch on the Rear Panel of the AW-E600E.
- The Menu will be displayed as shown Fig. 4-7 after execute the Scratch Compensation Mode.
- Move the cursor position by the ITEM/AWC Switch or YES/ABC Switch to " AUTO " position.
- Close the Lens and Blemish Concealment will starts by pressing the YES/ABC Switch.
- After completion of compensation, move the character blink to "End" position.
- The maximum Compensated Scratch Numbers are eight. When compensated data have been full, must be Clear the data first.
Select the " Clear " position by the ITEM/AWC Switch or YES/ABC Switch and press the YES/ABC Switch.
If the empty data have been more than seven, the data have written empty number.

■ Manual Adjustment Procedure

- Turn OFF the power of the AW-E600E.
- Remove the Blank Panel for the Option Card Slot.
- Insert the Manual Adjustment Card to the Option Card Slot.
- Set all Volume Controls on the Manual Adjustment Card to their mechanical center positions and the Gain Switches at 0 dB.
- Mount the Auto Iris Lens to the AW-E600E.

- Set the Lens Iris, Zoom and Focus by manually (either set the Auto/Manual Switch of the Lens to Manual side or disconnect the Iris Cable from the Iris Connector on the Rear Panel).
- In case if the Lens can not set the Iris, Zoom and Focus, connect the Iris Cable of the Lens to the Iris Connector of the AW-E600E.
- Connect the Remote Connector and the Lens Connector of the Manual Adjustment Card and set the IRIS CONT SW to the LOCAL side.
- Turn ON the power of the AW-E600E.
- Connect the Oscilloscope to E201 (G-IN) on the Preprocess Board.
- Adjust the Lens Focus to obtain correct focal point.
- Set the Lens Iris so that the peak level of the Gray Scale from the Blanking level becomes 300 mVp-p as shown in Fig.4-9.

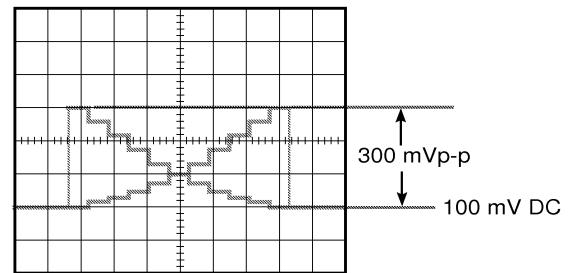


Fig. 4-9

(2).1. Pedestal Adjustment

Test Point:	VIDEO OUT	Manual Adjustment Card
Adjust:	R PEDE VR	Manual Adjustment Card
	G PEDE VR	Manual Adjustment Card
	B PEDE VR	Manual Adjustment Card

- Close the Lens Iris.
- Confirm the Gain Switch on the Manual Adjustment Card at 0 dB.
- Press the R PEDE SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pedestal Level by the R PEDE VR.
- Press the G PEDE SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pedestal Level by the G PEDE VR.
- Press the B PEDE SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pedestal Level by the B PEDE VR.
- Repeat adjust R PEDE, G PEDE and B PEDE so that all levels become satisfactory.

(2).2. Gain Adjustment

Test Point:	VIDEO OUT	Manual Adjustment Card
Adjust:	R GAIN VR	Manual Adjustment Card
	G GAIN VR	Manual Adjustment Card
	B GAIN VR	Manual Adjustment Card

- Set the Lens Iris to F11.
- Press the R GAIN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Video Signal Level by the R GAIN VR.
- Press the G GAIN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Video Signal Level by the G GAIN VR.
- Press the B GAIN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Video Signal Level by the B GAIN VR.
- Repeat adjust R GAIN, G GAIN and B GAIN so that all levels become satisfactory.

(2).3. Pulse Cancel Adjustment

Test Point:	VIDEO OUT	Manual Adjustment Card
Adjust:	R PULCAN VR	Manual Adjustment Card
	G PULCAN VR	Manual Adjustment Card
	B PULCAN VR	Manual Adjustment Card

- Close the Lens Iris.
- Set the GAIN SW on the Manual Adjustment Card to 30 dB.
- Press the R PULCAN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pulse Cancel Level by the R PULCAN VR.
- Press the G PULCAN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pulse Cancel Level by the G PULCAN VR.
- Press the B PULCAN SW (which has been illuminated) on the Manual Adjustment Card, and adjust Pulse Cancel Level by the B PULCAN VR.
- Repeat adjust R Pulse PULCAN, G PULCAN and B PULCAN so that all levels become satisfactory.
- Repeat adjust from **Item (2).1.** to **Item (2).3.** so that the Pedestal Level Adjustment, Gain Adjustment and Pulse Cancel Adjustment have been satisfied.
- After completion of adjustment, to select the adjusted Item (which has been illuminated) and press the WRITE SW on the Manual Adjustment Card slowly and release it.

■ HD and VD Signals, Voltage, Video Signal and Clock Pulse Confirmation

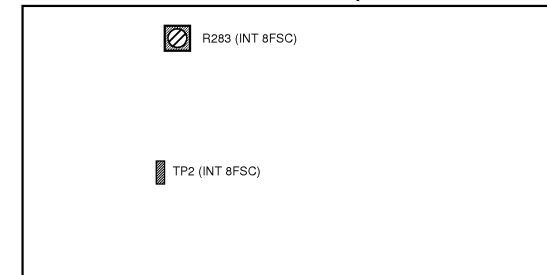
- Can be confirmed Internal HD and VD Signals, DC Power Sources, Video Signals (R,G,B and Composite signal outputs at the Preprocess Board) and Clock Pulse (28 MHz) at each Test Point at the Manual Adjustment Card.

■ Motor Drive Lens Control

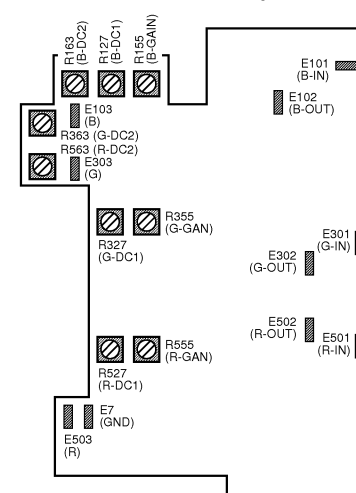
- Turn OFF the power of the AW-E600E.
- Connect the Iris Cable to the Iris Connector on the Rear Panel of the AW-E600E, and connect the I/F Remote Connector to the LENS CN on the Manual Adjustment Card.
- Set the AUTO/MANUAL Switch to AUTO position.
- Turn ON the power of the AW-E600E.
- Set the IRIS CONT SW on the Manual Adjustment Card to the LOCAL so that the Iris has been controlled by the IRIS VR on the Manual Adjustment Card (close at fully counterclockwise direction and open at fully clockwise direction).
- Set the IRIS CONT SW on the Manual Adjustment Card to the CAMERA so that the Lens has been operated as the ALC Mode.
- Either press the ZOOM SW (WIDE/TELE) and FOCUS SW (NEAR/FAR), activates the Zoom and/or Focus.

LOCATION OF TEST POINTS AND ADJUSTING CONTROLS

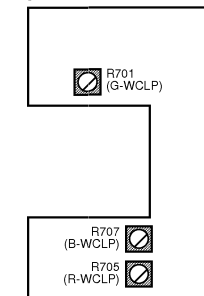
DSP / ENCODER BOARD (PATTERN SIDE)



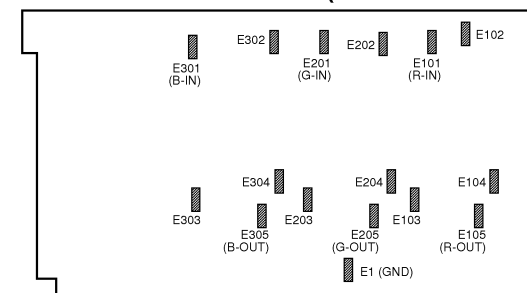
PREAMP.-BOARD (PATTERN SIDE)



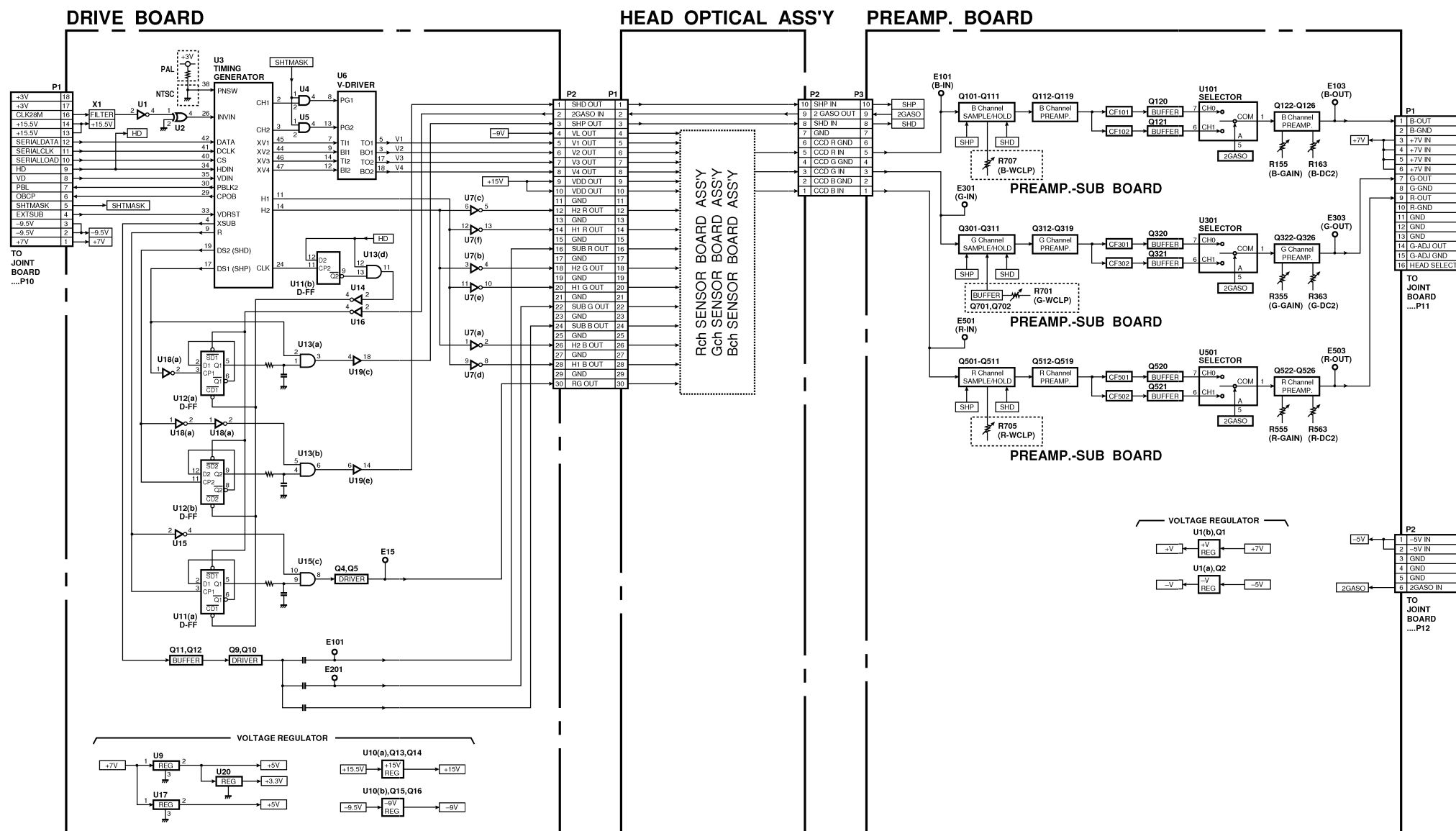
PREAMP.-SUB BOARD (PATTERN SIDE)



PREPROCESS BOARD (PATTERN SIDE)

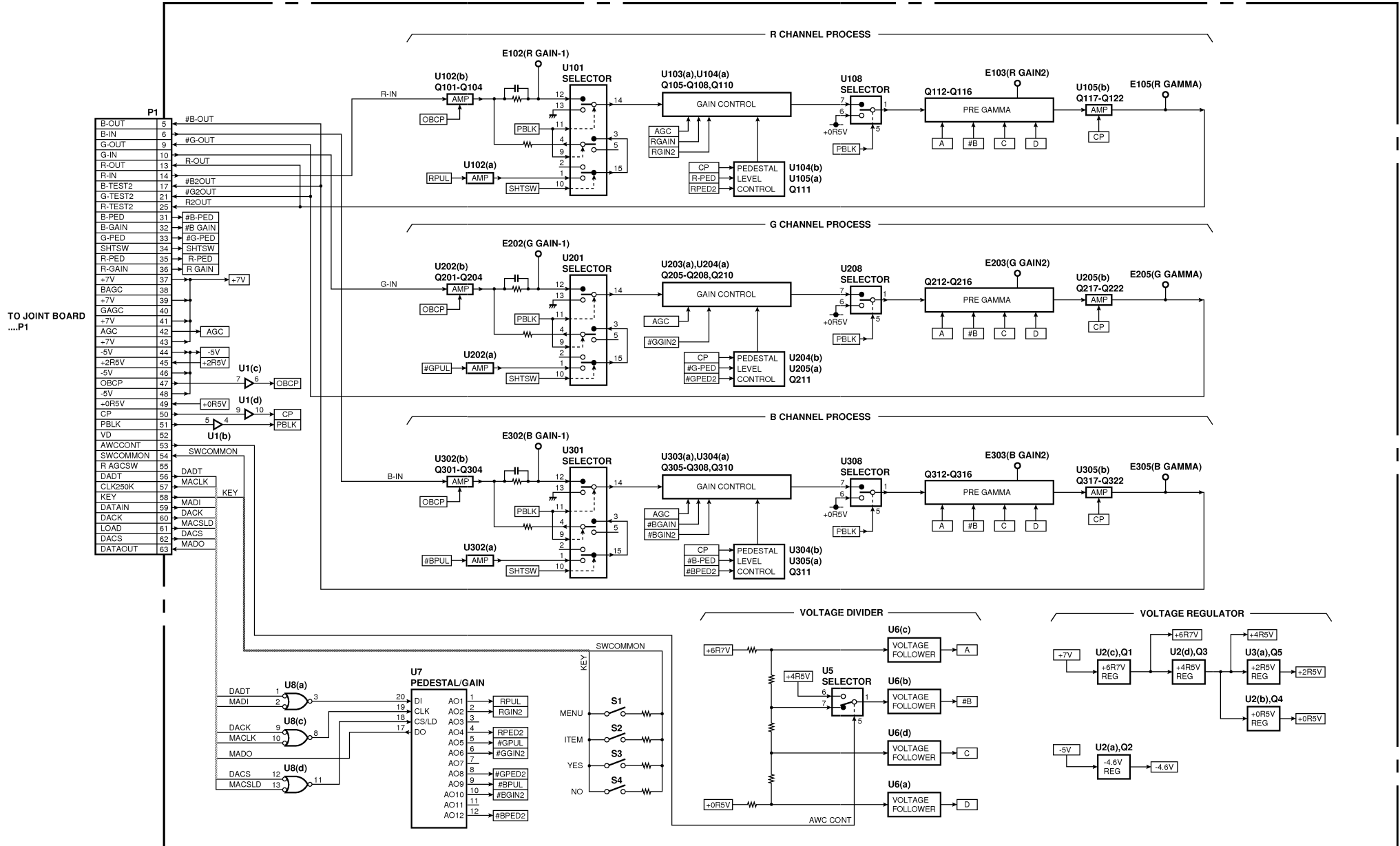


BLOCK DIAGRAM OF DRIVE BOARD / PREAMP BOARD



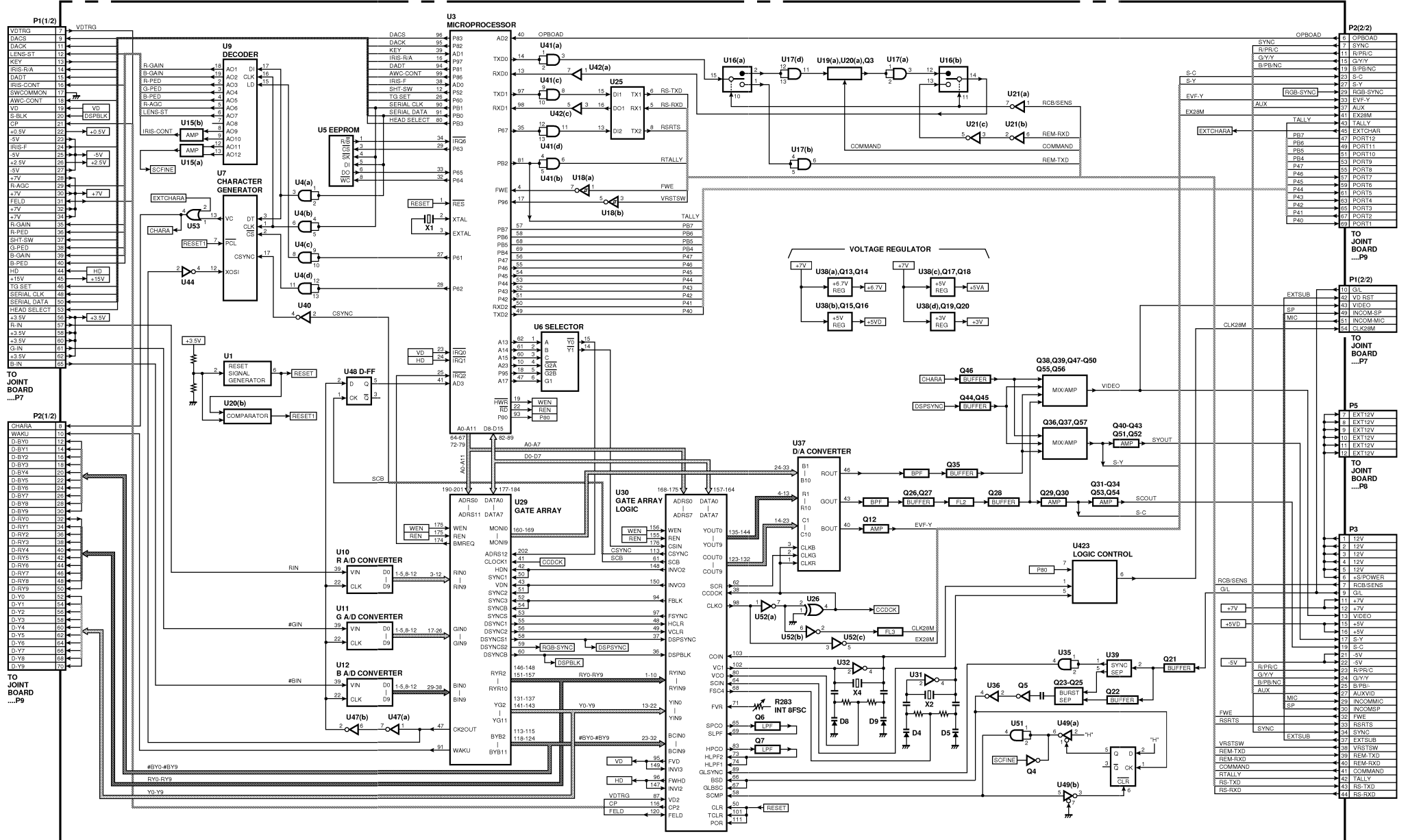
BLOCK DIAGRAM OF PREPROCESS BOARD

PREPROCESS BOARD

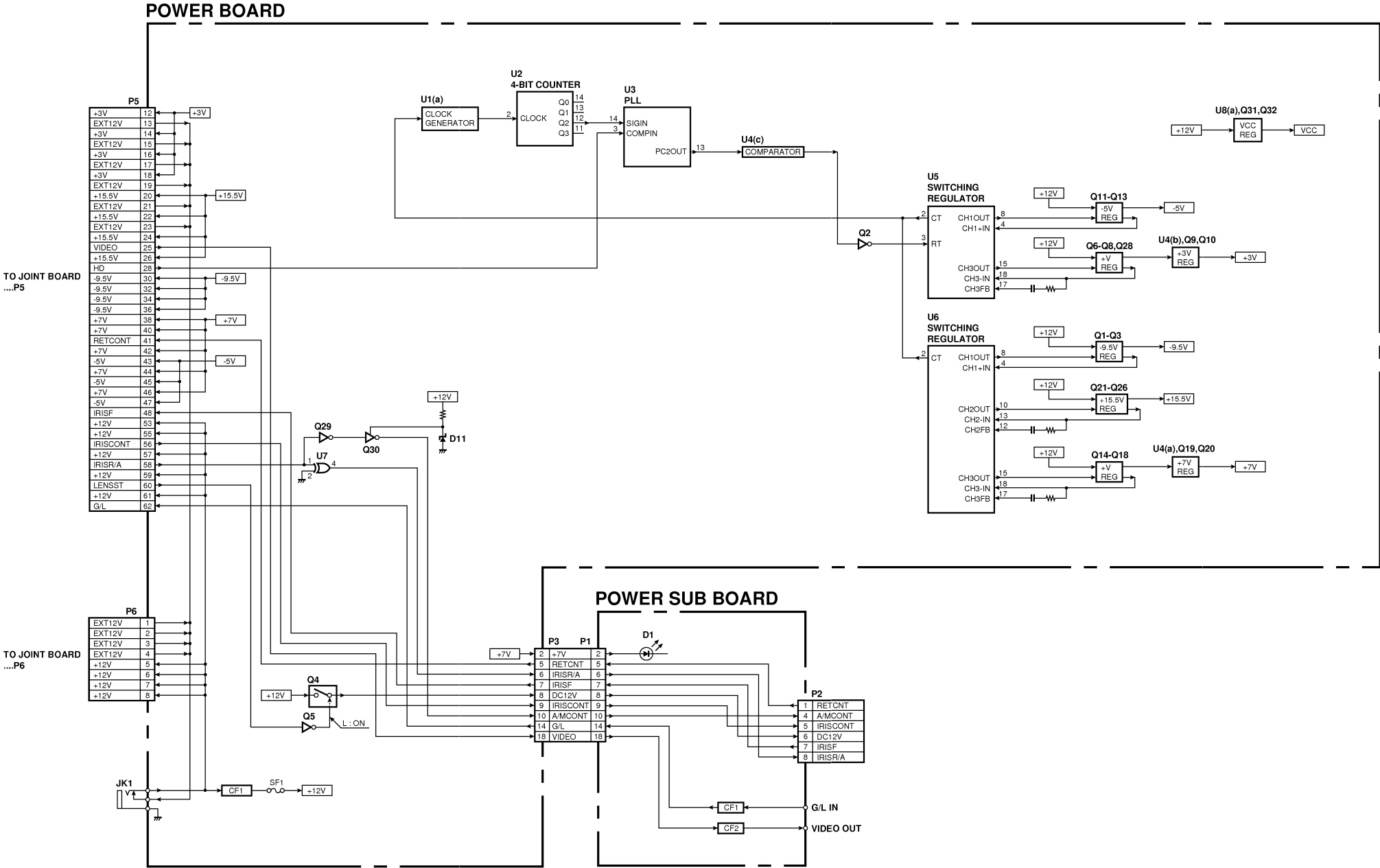


BLOCK DIAGRAM OF DSP / ENCODER BOARD

DSP / ENCODER BOARD

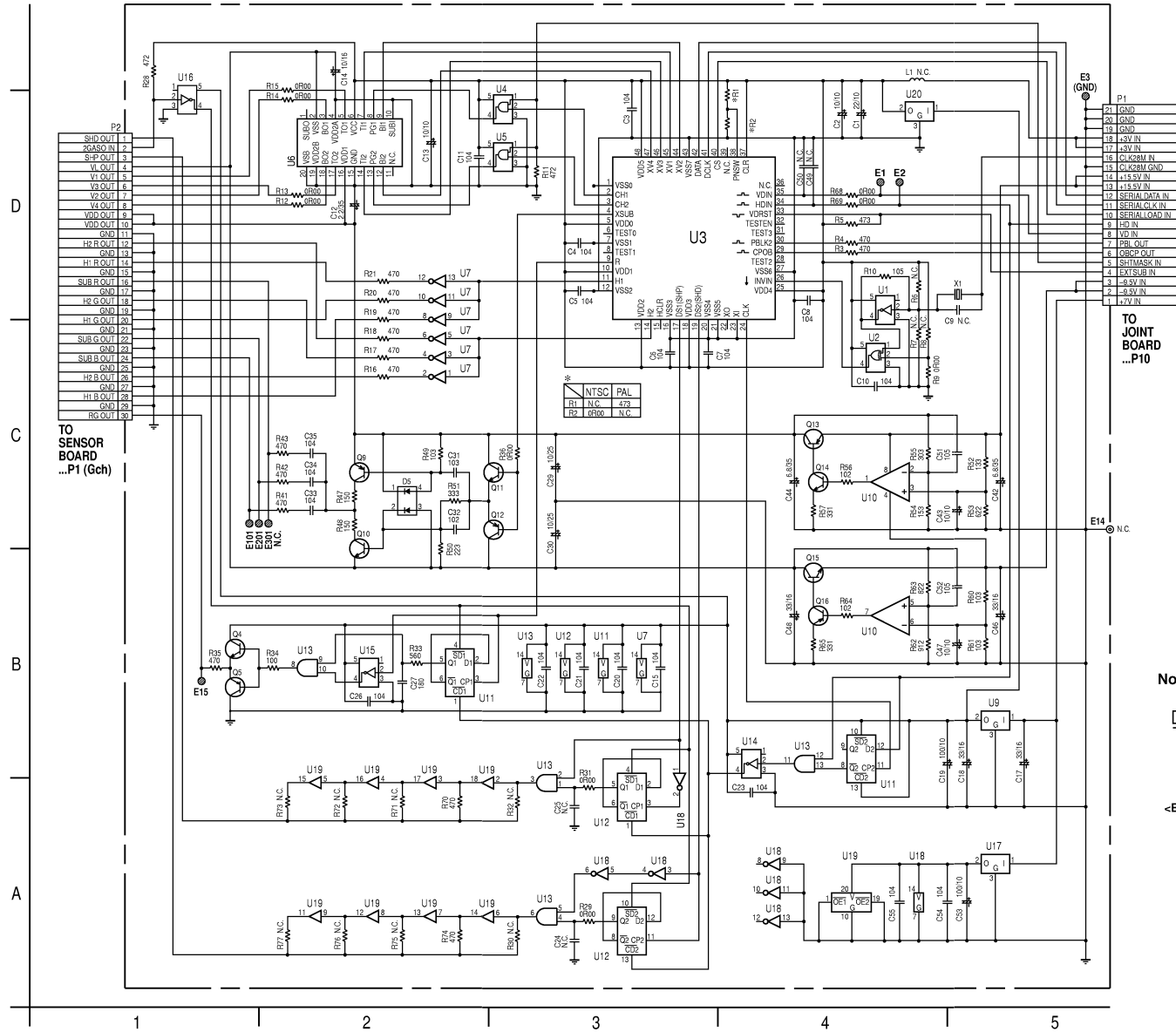


BLOCK DIAGRAM OF POWER BOARD / POWER SUB BOARD



SCHEMATIC DIAGRAM OF DRIVE BOARD

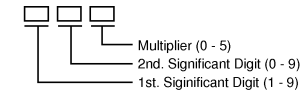
DRIVE BOARD



< INDEX > DRIVE BOARD

U1	D4
U2	C4
U3	D3/D4
U4	D3
U5	D3
U6	D2
U7	B3,C2,D2
U8	B5
U9	B5
U10	C2,D4
U11	B2,B3,B4
U12	A3,B3
U13	A3,B2,B3,B4
U14	B4
U15	B2
U16	D1
U17	A5
U18	A3,A4,B3
U19	A2,A3,B2,B3,B4
U20	D4
Q4	B2
Q5	B2
Q9	C2
Q10	B2/C2
Q11	C3
Q12	C3
Q13	C4
Q14	C4
Q15	B4
Q16	B4
D5	C2

Note: The value indicated in the schematic diagram should be read as follows:



<Example>

For Resistor:

330 → $33 \times 10^0 = 33 \Omega$
 561 → $56 \times 10^1 = 560 \Omega$
 123 → $12 \times 10^3 = 12k \Omega$
 0R00 = 0Ω

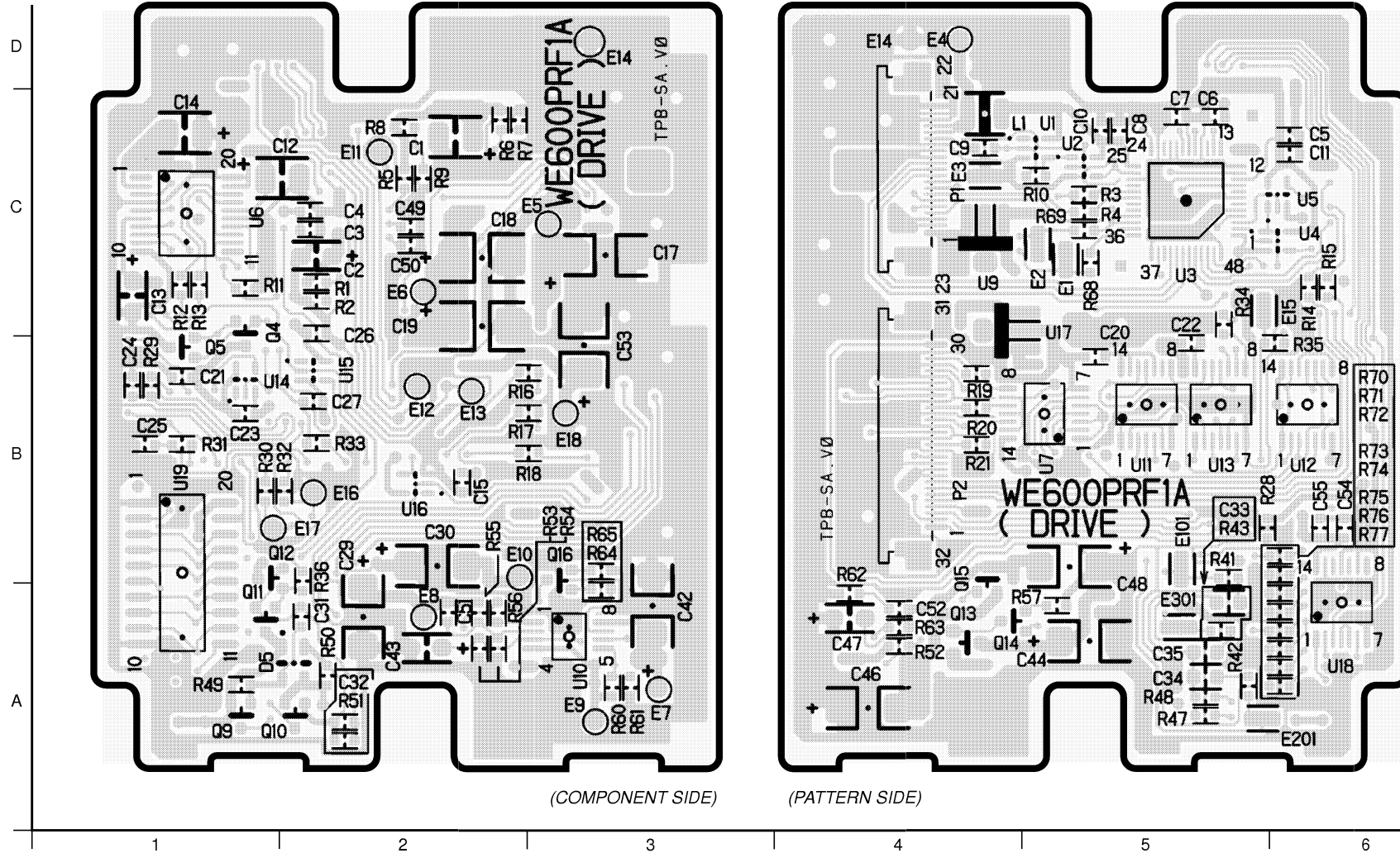
For Capacitor:

820 → $82 \times 10^0 = 82 pF$
 102 → $10 \times 10^2 = 1000 pF = 0.001 \mu F$
 104 → $10 \times 10^4 = 100000 pF = 0.1 \mu F$

The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF DRIVE BOARD

DRIVE BOARD



< INDEX >
DRIVE BOARD

U1	C5
U2	C5
U3	C5
U4	C6
U5	C6
U6	C1
U7	B5
U9	C4
U10	A3
U11	B5
U12	B6
U13	B5
U14	B1
U15	B2
U16	B2
U17	C4
U18	A6
U19	B1
U20	A1
Q4	C1
Q5	B1
Q9	A1
Q10	A2
Q11	A1
Q12	B1
Q13	A4
Q14	A4
Q15	B4
Q16	B3
D5	B2

CONDUCTOR VIEW OF DSP / ENCODER-SUB BOARD

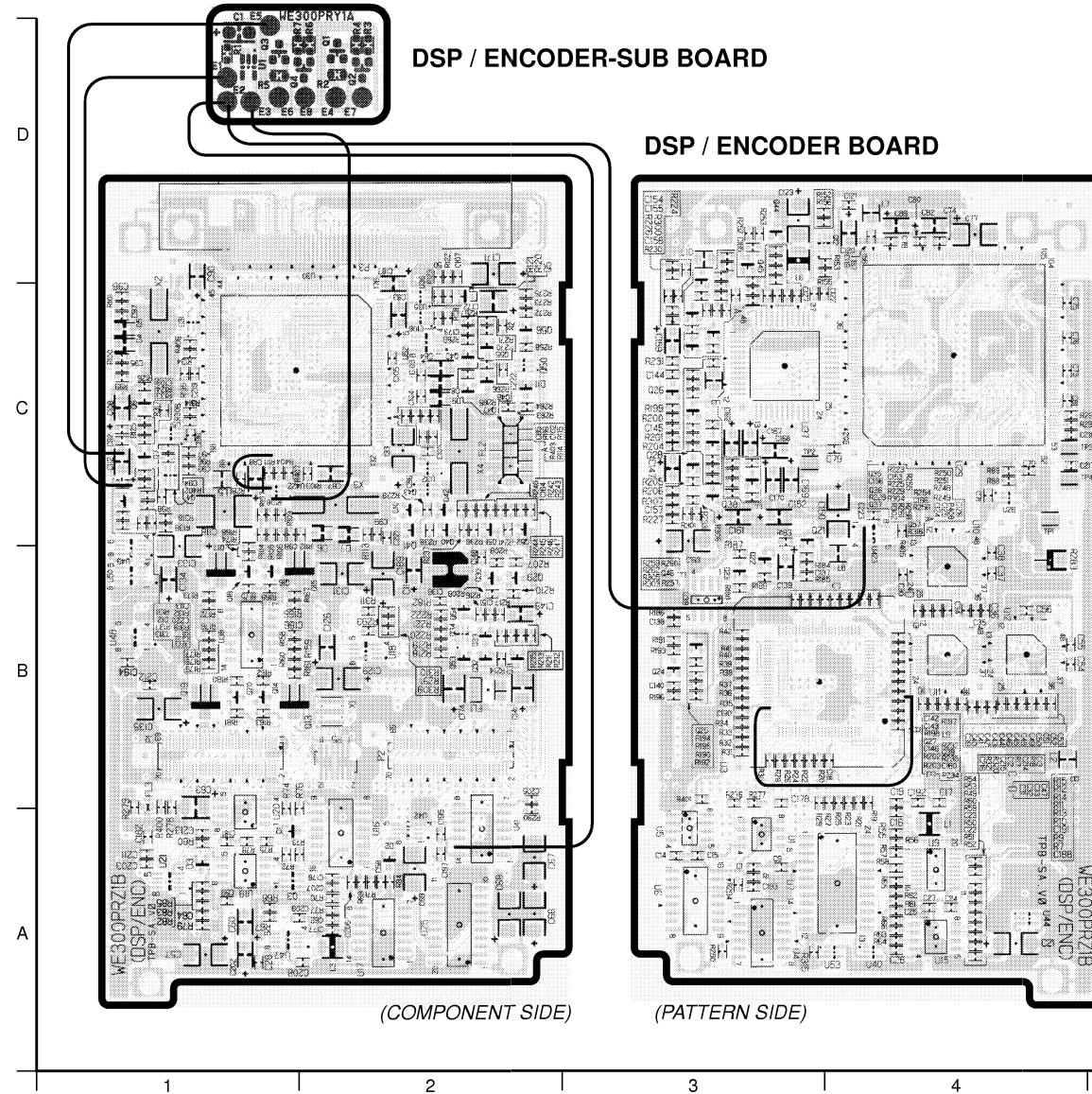
< INDEX > DSP/ENCODER BOARD

U1	A3	Q50	C2
U3	B3	Q51	C2
U4	A3	Q52	C2
U5	A3	Q53	B2
U6	A3	Q54	B2
U7	A4	Q55	C2
U9	A4	Q56	C2
U10	B4	Q57	C3
U11	B4		
U12	B4	D1	A1
U15	A4	D2	A2
U16	A2	D3	A1
U17	A2	D4	C1
U18	B2	D5	C1
U19	A1	D8	C2
U20	A1	D9	C2
U21	A1	D10	C2
U25	A2		
U26	C4		
U29	C4		
U30	C1		
U31	C1		
U32	C2		
U35	C2		
U36	C2		
U37	C3		
U38	B1		
U39	B3		
U40	A4		
U41	A2		
U42	A2		
U44	A4		
U47	A1		
U48	B1		
U49	B1		
U50	B1		
U51	C1		
U52	C2		
U53	A4		
U423	C4		

< INDEX > DSP/ENCODER-SUB BOARD

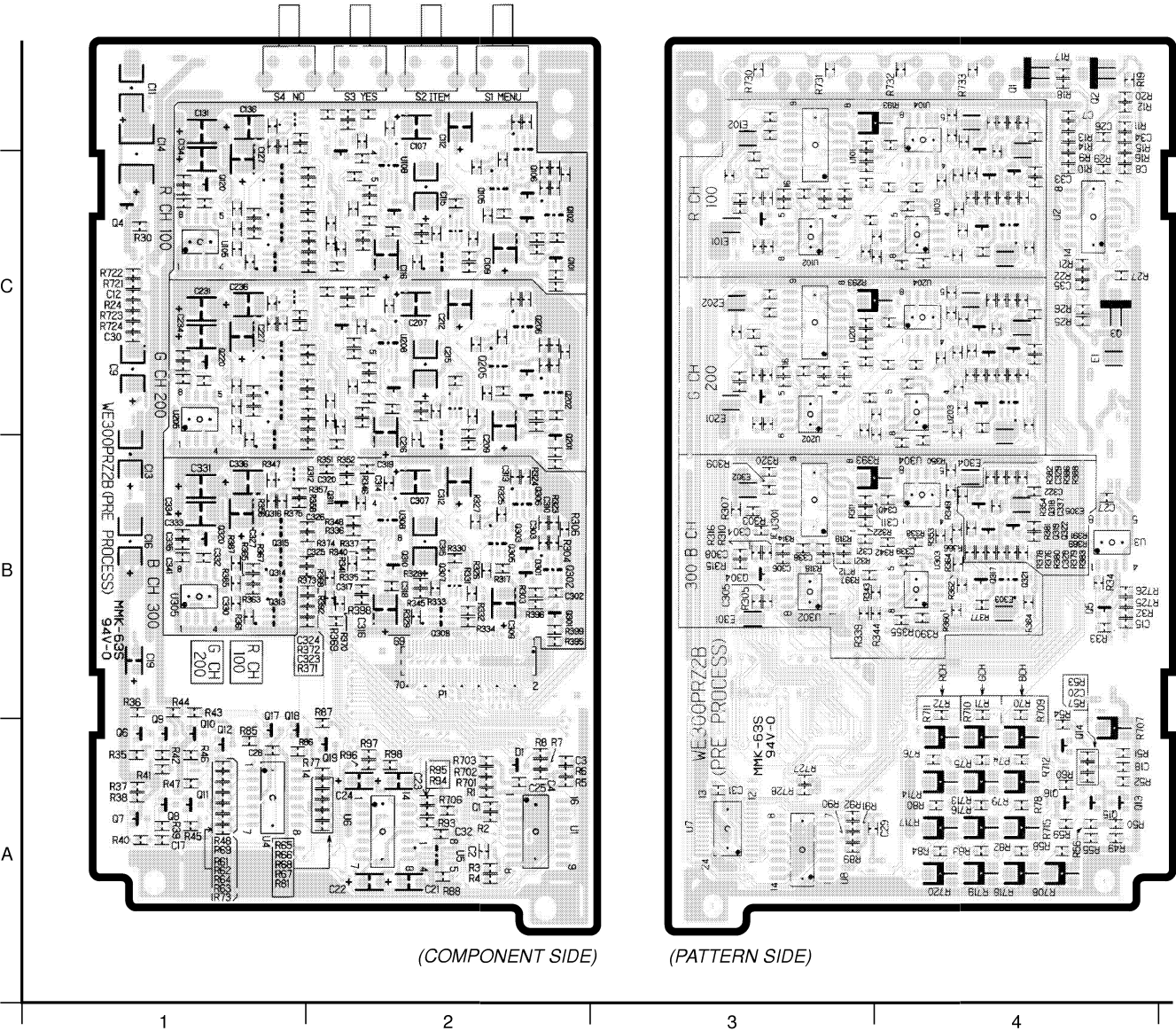
U1	D1
----	----

Q3	A1
Q4	C1
Q5	C2
Q6	C1
Q7	C1
Q12	B3
Q13	B1
Q14	B1
Q15	B2
Q16	B1
Q17	B1
Q18	B1
Q19	B1
Q20	B1
Q21	B3
Q22	B3
Q23	B3
Q24	B3
Q25	B3
Q26	C3
Q27	C3
Q28	C3
Q29	B2
Q30	B2
Q31	B2
Q32	B2
Q33	B2
Q34	B3
Q35	B3
Q36	C3
Q37	C3
Q38	C3
Q39	C3
Q40	C2
Q41	C2
Q42	C2
Q43	C2
Q44	D3
Q45	D3
Q46	C3
Q47	C2
Q48	C2
Q49	C2



CONDUCTOR VIEW OF PREPROCESS BOARD

PREPROCESS BOARD

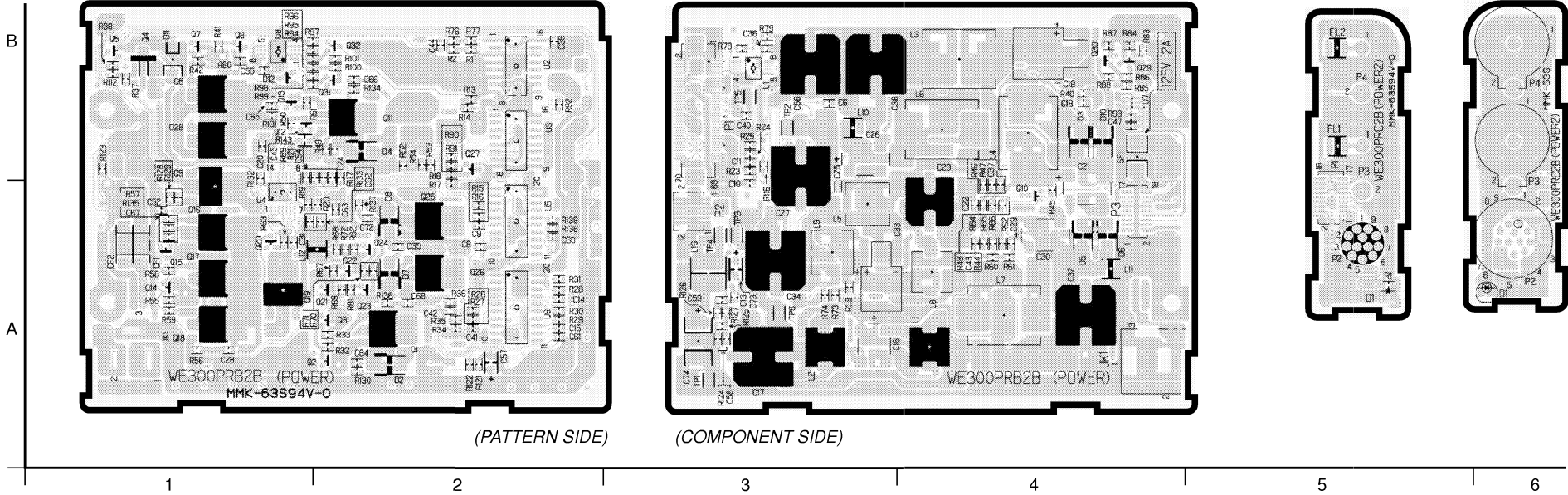


< INDEX >
PREPROCESS BOARD

U1	A2	Q219
U2	C4	Q220
U3	B4	Q221
U5	A2	Q222
U6	A2	Q301
U7	A3	Q302
U8	A3	Q303
U101	B3	Q304
U102	C3	Q305
U103	C4	Q306
U104	C4	Q307
U105	C1	Q308
U108	C2	Q310
U201	C3	Q311
U202	C3	Q312
U203	C4	Q313
U204	C4	Q314
U205	C1	Q315
U208	C2	Q316
U301	B3	Q317
U302	B3	Q318
U303	B4	Q319
U304	B4	Q320
U305	B1	Q321
U308	B2	Q322
Q1	D4	D1
Q2	C4	D101
Q3	C1	D201
Q4	C1	D301
Q5	B4	
Q101	C2	
Q102	C2	
Q103	C2	
Q104	C2	
Q105	C2	
Q106	C2	
Q107	C2	
Q108	C2	
Q109	C2	
Q110	C2	
Q111	C2	
Q112	C2	
Q113	C2	
Q114	C2	
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Q119	C2	
Q120	C2	
Q121	C2	
Q122	C2	
Q201	C2	
Q202	C2	
Q203	C2	
Q204	C2	
Q205	C2	
Q206	C2	
Q207	C2	
Q208	C2	
Q209	C2	
Q210	C2	
Q211	C2	
Q212	C2	
Q213	C2	
Q214	C2	
Q215	B1	
Q216	B1	
Q217	B1	
Q218	C4	

CONDUCTOR VIEW OF POWER BOARD / POWER-SUB BOARD

POWER BOARD



< INDEX > POWER BOARD

U1	B3	Q17	A1
U2	B2	Q18	A1
U3	B2	Q19	A1
U4	A1	Q20	A1
U5	A2	Q21	A2
U6	A2	Q22	A2
U7	B4	Q23	A2
U8	B1	Q24	A2
		Q25	A2
		Q26	A2
Q1	A2	Q27	B2
Q2	A2	Q28	B1
Q3	A2	Q29	B4
Q4	B1	Q30	B4
Q5	B1	Q31	B2
Q6	B1	Q32	B2
Q7	B1		
Q8	B1		
Q9	A1	D2	A2
Q10	A4	D3	B4
Q11	B2	D4	B2
Q12	B1	D5	A4
Q13	B1	D6	A4
Q14	A1	D7	A2
Q15	A1	D8	A2
Q16	A1	D10	B4

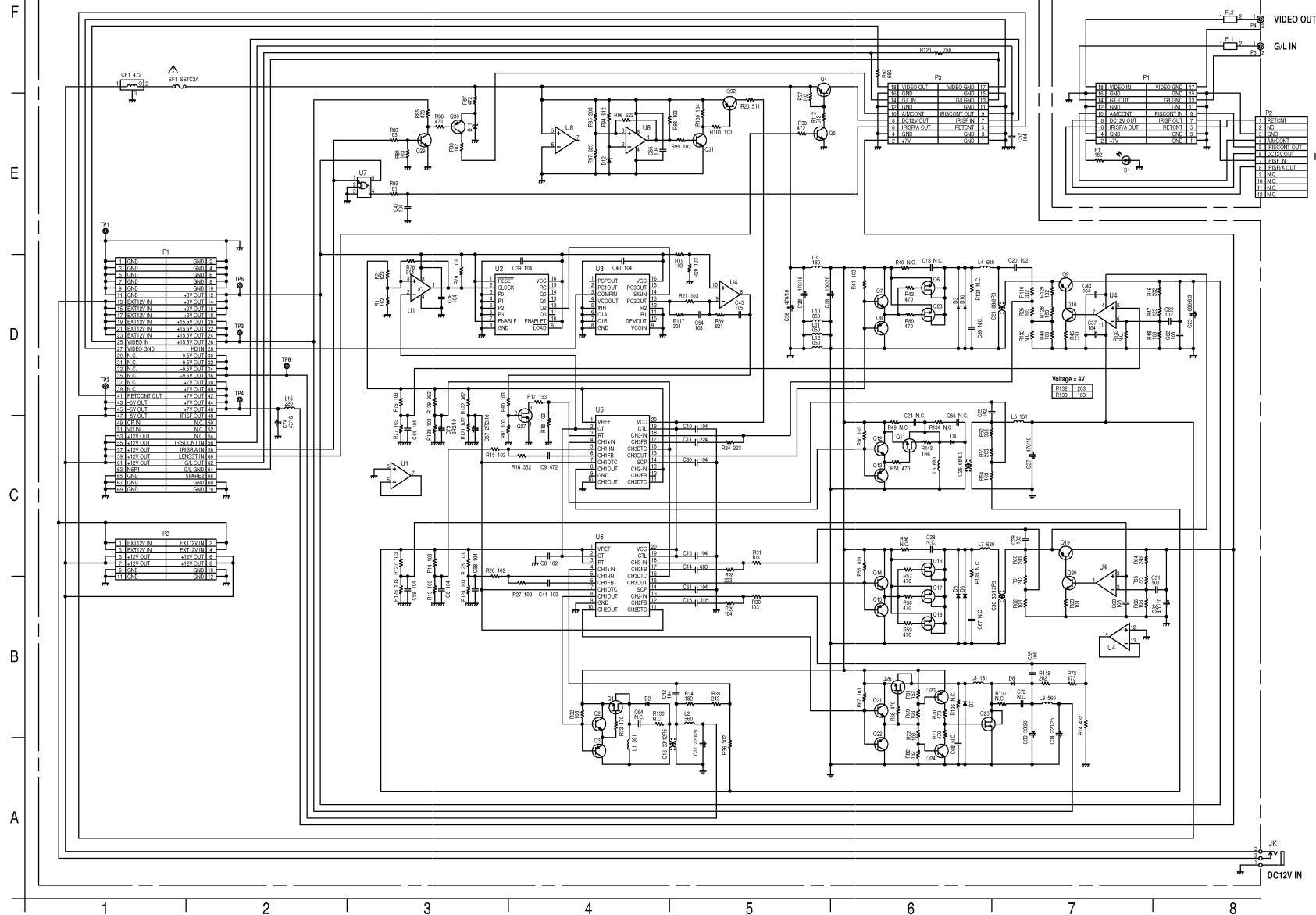
< INDEX > POWER-SUB BOARD

D1	A6
----	----

SCHEMATIC DIAGRAM OF POWER BOARD / POWER-SUB BOARD

POWER BOARD

POWER-SUB BOARD



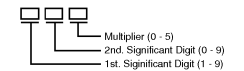
< INDEX >
POWER BOARD
U1 C3/D3
U2 D3/D4
U3 D4
U4 A7/D7
U5 C4
U6 B4/C4
U7 E3
U8 E4

Q1 B4
Q2 B4
Q3 A4
Q4 F4
Q5 E4
Q6 D6
Q7 D6
Q8 D6
Q9 D7
Q10 D7
Q11 C6
Q12 C6
Q13 C6
Q14 B6/C6
Q15 B6
Q16 B6
Q17 B6
Q18 B6
Q19 C7
Q20 B7/C7
Q21 B6
Q22 A6/B6
Q23 B6
Q24 A6
Q25 A6/A7
Q26 B6
Q27 C4/D4
Q28 D6
Q29 E3
Q30 E3
Q31 E5
Q32 E5/F5

D2 B4
D3 D6
D4 C6
D5 B6
D6 B6
D7 B6
D8 B7
D10 E3
D12 E4

< INDEX >
POWER-SUB BOARD
D1 E7

Note: The value indicated in the schematic diagram should be read as follows:



<Example>

For Resistor:

330 → 33 × 10⁰ = 33 Ω
561 → 56 × 10¹ = 560 Ω
123 → 12 × 10³ = 12k Ω
0R00 = 0 Ω

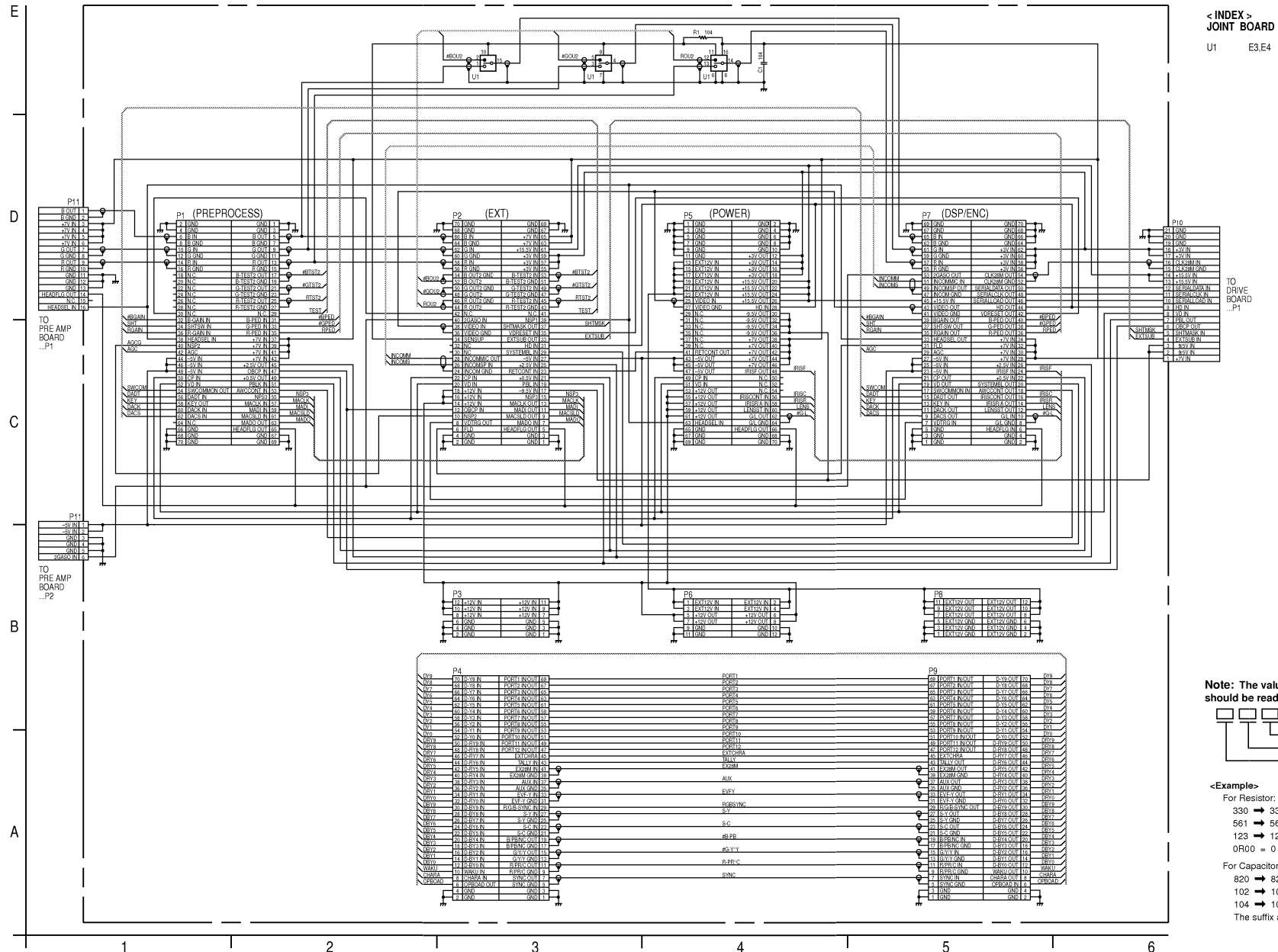
For Capacitor:

820 → 82 × 10⁰ = 82 pF
102 → 10 × 10² = 1000 pF = 0.001 μF
104 → 10 × 10⁴ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

Important safety notice
Components identified by "△" mark have special characteristics for safety.
When replacing any of these components, use only manufacturer's specified parts.

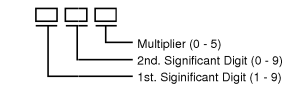
SCHEMATIC DIAGRAM OF JOINT BOARD

JOINT BOARD



< INDEX >
JOINT BOARD
U1 E3.E4

Note: The value indicated in the schematic diagram should be read as follows:



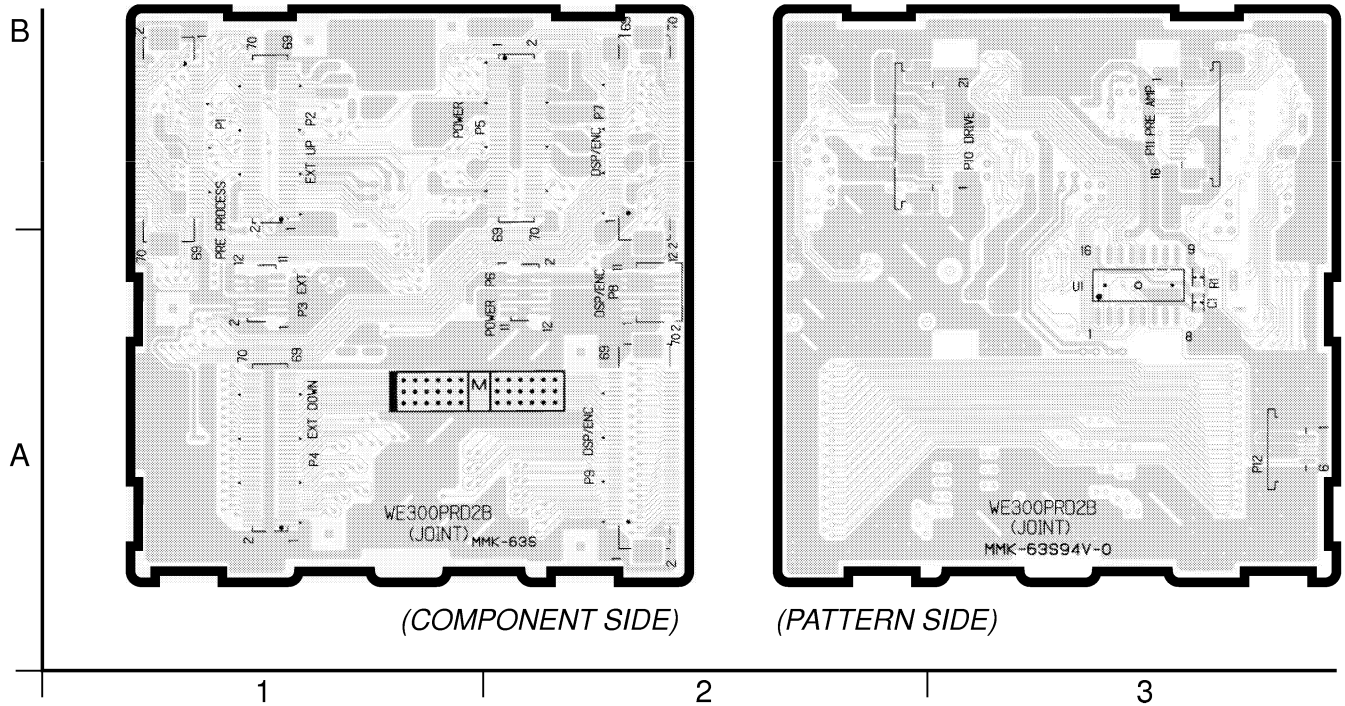
<Example>

For Resistor:
330 → 33 × 10⁰ = 33 Ω
561 → 56 × 10¹ = 560 Ω
123 → 12 × 10³ = 12k Ω
0R00 = 0 Ω

For Capacitor:
820 → 82 × 10⁰ = 82 pF
102 → 10 × 10² = 1000 pF = 0.001 μF
104 → 10 × 10⁴ = 100000 pF = 0.1 μF
The suffix attached to capacitance indicates a type of capacitor.

CONDUCTOR VIEW OF JOINT BOARD

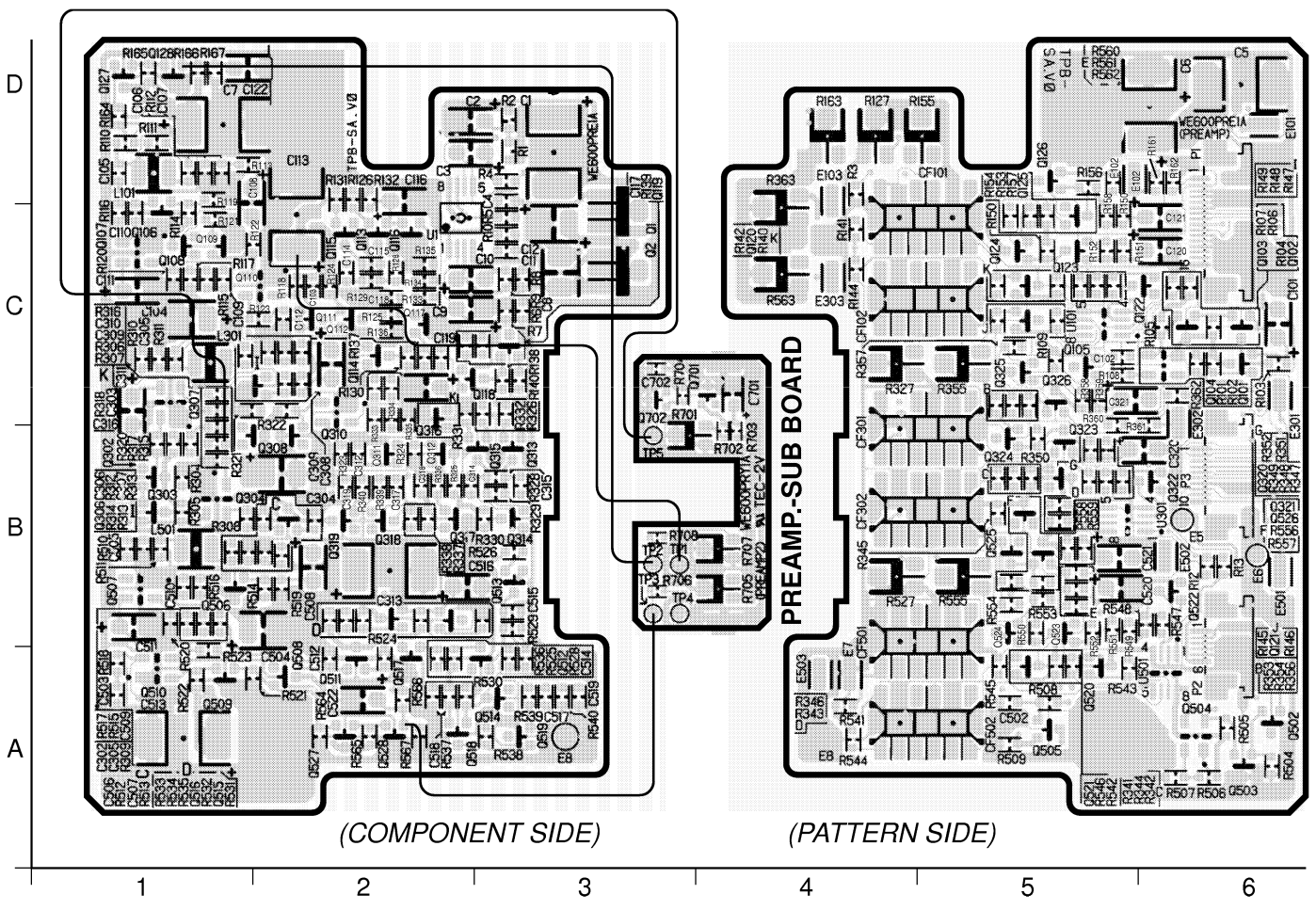
JOINT BOARD



< INDEX >
JOINT BOARD
U1 A3

CONDUCTOR VIEW OF PREAMP. BOARD

PREAMP. BOARD



< INDEX > PREAMP. BOARD

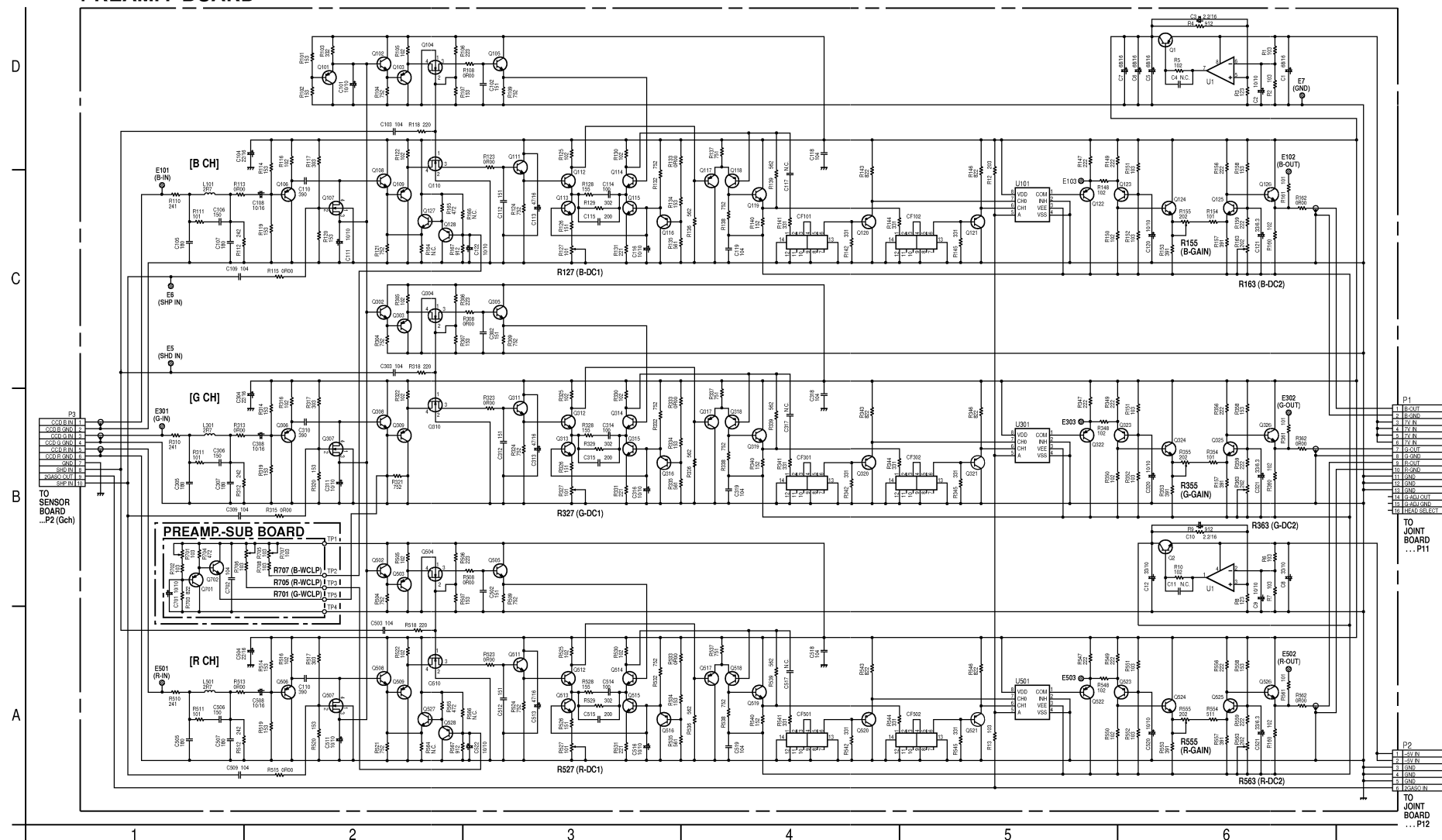
U1	C2	Q122	C6	Q323	B5	Q526	B5
U101	C5	Q123	C5	Q324	B5	Q527	A2
U301	B5	Q124	C5	Q325	C5	Q528	A2
U501	A6	Q125	C5	Q326	C5		
		Q126	D5	Q502	A6		
Q1	C3	Q127	D1	Q503	A6		
Q2	C3	Q128	D1	Q504	A6		
Q101	C6	Q302	B1	Q505	A5		
Q102	C6	Q303	B1	Q506	B1		
Q103	C6	Q304	B1	Q507	B1		
Q104	C6	Q305	B2	Q508	A2		
Q105	C5	Q306	C2	Q509	A1		
Q106	C1	Q307	C1	Q510	A1		
Q107	C1	Q308	B2	Q511	A2		
Q108	C1	Q309	B2	Q512	A3		
Q109	C1	Q310	C2	Q513	B3		
Q110	C2	Q311	B2	Q514	A3		
Q111	C2	Q312	B2	Q515	B2		
Q112	C2	Q313	B3	Q516	B2		
Q113	C2	Q314	B3	Q517	A2		
Q114	C2	Q315	B3	Q518	A2		
Q115	C2	Q316	C2	Q519	A3		
Q116	C2	Q317	B2	Q520	A5		
Q117	C2	Q318	B2	Q521	A5		
Q118	C2	Q319	B2	Q522	B6		
Q119	C3	Q320	B5	Q523	B5		
Q120	C5	Q321	B5	Q524	B5		
Q121	C5	Q322	B6	Q525	B5		

< INDEX > PREAMP.-SUB BOARD

Q701	C4
Q702	C3

SCHEMATIC DIAGRAM OF PREAMP. BOARD

PREAMP. BOARD



< INDEX > PREAMP. BOARD

U1	B6,D6	Q315	B3
U101	C5	Q316	B3
U301	B5	Q317	B4
U501	A5	Q318	B4
		Q319	B4
Q1	D6	Q320	B4
Q2	B6	Q321	B5
Q101	D2	Q322	B5
Q102	D2	Q323	B6
Q103	D2	Q324	B6
Q104	D2	Q325	B6
Q105	D3	Q326	B6
Q106	C2	Q502	B2
Q108	C2	Q503	B2
Q109	C2	Q504	B2
Q110	D2	Q505	B3
Q111	D3	Q506	A2
Q112	D3	Q507	A2
Q113	C3	Q508	A2
Q114	C3	Q509	A2
Q115	C3	Q510	A2
Q116	C3	Q511	A3
Q117	C4	Q512	A3
Q118	C4	Q513	A3
Q119	C4	Q514	A3
Q120	C4	Q515	A3
Q121	C5	Q516	A3
Q122	C5	Q517	A4
Q123	C6	Q518	A4
Q124	C6	Q519	A4
Q125	C6	Q520	A4
Q126	C2	Q521	A5
Q127	C2	Q522	A5
Q128	C2	Q523	A6
Q302	C2	Q524	A6
Q303	C2	Q525	A6
Q304	C2	Q526	A6
Q305	C3	Q527	A2
Q306	B2	Q528	A2
Q307	B2		
Q308	B2		
Q309	B2		
Q310	B2		
Q311	B3		
Q312	B3		
Q313	B3		
Q314	B3		

< INDEX > PREAMP-SUB BOARD

Q701	B1
Q702	B1

Note: The value indicated in the schematic diagram should be read as follows:



Multiplier (0 - 5)
2nd. Significant Digit (0 - 9)
1st. Significant Digit (1 - 9)

<Example>

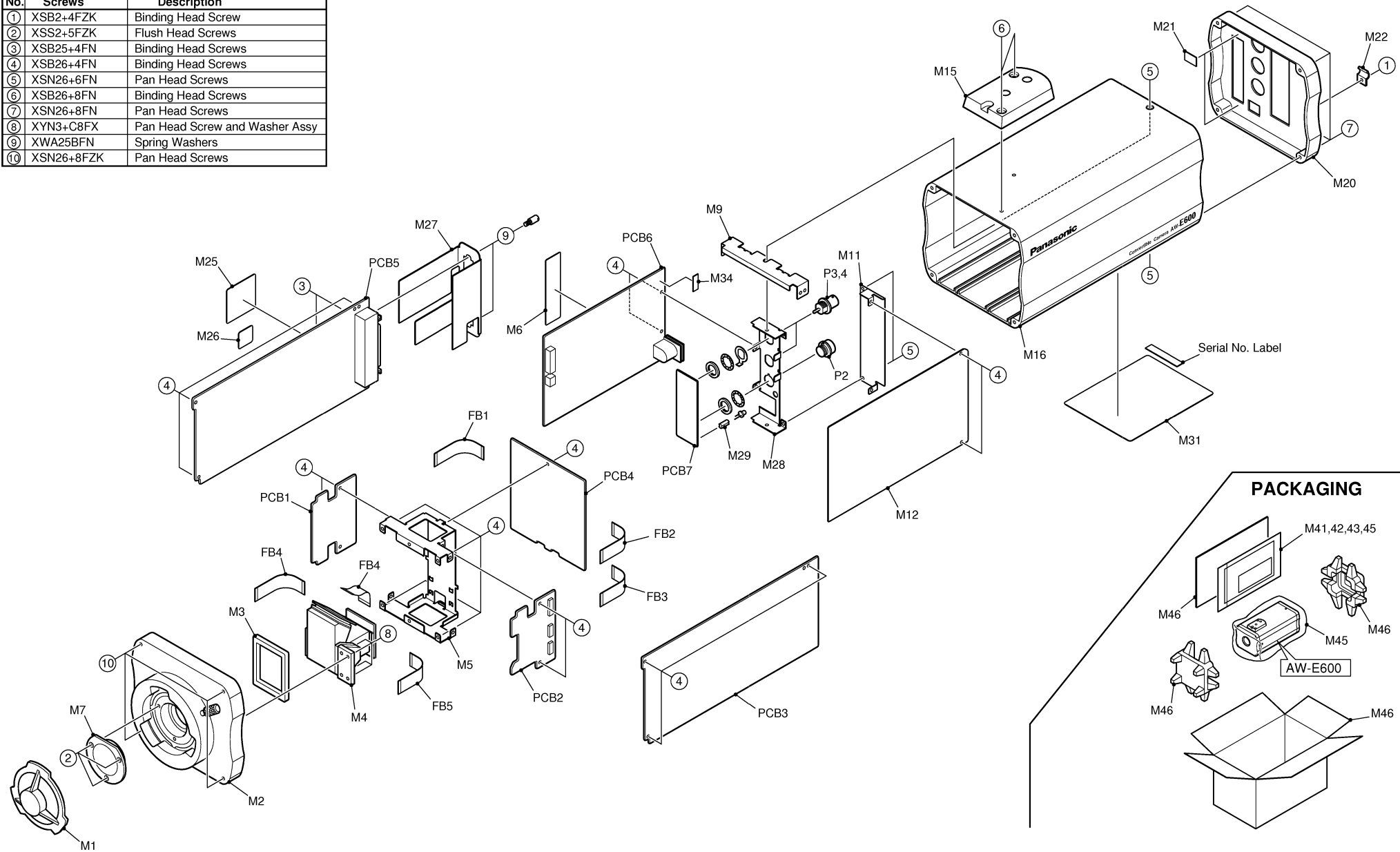
For Resistor:
330 $\rightarrow 33 \times 10^3 = 33 \Omega$
561 $\rightarrow 56 \times 10^1 = 560 \Omega$
123 $\rightarrow 12 \times 10^{-2} = 12 \text{ m}\Omega$
0R00 = 0 Ω

For Capacitor:
820 $\rightarrow 82 \times 10^{-9} = 82 \text{ pF}$
102 $\rightarrow 10 \times 10^{-6} = 1000 \text{ pF} = 0.001 \mu\text{F}$
104 $\rightarrow 10 \times 10^{-4} = 100000 \text{ pF} = 0.1 \mu\text{F}$
The suffix attached to capacitance indicates a type of capacitor.

EXPLODED VIEW

○ Numbers show screws, washers, nuts and etc.

No.	Screws	Description
①	XSB2+4FZK	Binding Head Screw
②	XSS2+5FZK	Flush Head Screws
③	XSB25+4FN	Binding Head Screws
④	XSB26+4FN	Binding Head Screws
⑤	XSN26+6FN	Pan Head Screws
⑥	XSB26+8FN	Binding Head Screws
⑦	XSN26+8FN	Pan Head Screws
⑧	XYN3+C8FX	Pan Head Screw and Washer Assy
⑨	XWA25BFN	Spring Washers
⑩	XSN26+8FZK	Pan Head Screws



REPLACEMENT PARTS LIST

Important Notice

- Components identified by " △ " mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.
- RTL : Retention Time Limited (No longer available after discontinuing product).

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
MISCELLANEOUS			DRIVE BOARD		
FB1	S21E300A2	Special Cable	PCB1 (RTL)	YWWE600PKF1A	Printed Circuit Board Assy
FB2	S16E300A2	Special Cable	U1	C0JBAB000175	IC
FB3	S6E600A4	Special Cable	U2	C0JBAB000004	IC
FB4	S30E600A3	Special Cable	U3	CXD2454AR	IC
FB5	S10E600A1	Special Cable	U4,5	YWTC7SH32FUL	IC
M1	YWV5GA1001A3	Cap	U6	C1AB00000340	IC
M2	9A1A403A	Front Escutcheon	U7	MC74ACT04DT	IC
M3	YW5E1A061A	Cushion	U9	YW78L05UATE2	IC
M4	0E1A029A	Head Optical Assy	U10	C0ABBA000025	IC
M5	YW1B1B271B	Mounting Parts	U11,12	C0JBAF000239	IC
M6	5G1A102A	Sheet	U13	C0JBAA000157	IC
M7	0E1A031A	IR Filter Assy	U14-16	C0JBAB000005	IC
M9	YW1B1B009A	Mounting Parts	U17	YW78L05UATE2	IC
M11	YW1A1A234A	Cabinet Parts	U18	MC74ACT04DT	IC
M12	YW1C1A073A	Shield Parts	U19	YULSQ0025	IC
M15	YWV2TA1045A3	Mounting Bracket	U20	BA033FP	IC
M16	4A1A014A	Case	Q4	B1ABDB000007	Transistor
M20	4C1A004A	Panel	Q5	B1ADBB000010	Transistor
M21	5G1A067A	Sheet	Q9	2SB1218AHL	Transistor
M22	YWV2GA0065A4	Cord Clamp	Q10,11	2SD1819ARSTX	Transistor
M25	5G1A068B	Sheet	Q12	2SB1218AHL	Transistor
M26	5G1A069A	Sheet	Q13	2SB09700HL	Transistor
M27	1E1A003B	Heat Sink	Q14	2SD1819ARSTX	Transistor
M28	YW1B1B010A	Mounting Parts	Q15	2SD13280HL	Transistor
M29	YW8Z1A030A	LED Holder	Q16	2SB1218AHL	Transistor
M31 △	7C1A082A	Main Label	D5	MA159	Diode
M35	YW7G1B018A	Label	R4	ERJ3GEYJ473	Carbon 47K ohms 1/16W
M36	YW7G1B016A	Label	R3,4	ERJ3GEYJ470	Carbon 47 ohms 1/16W
			R5	ERJ3GEYJ473	Carbon 47K ohms 1/16W
			R8	ERJ3GEY0R00	Carbon 0 ohm 1/16W
			R10	ERJ3GEYJ105	Carbon 1M ohms 1/16W
			R11	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W
			R12-21	ERJ3GEYJ470	Carbon 47 ohms 1/16W
			R28	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W
			R29	ERJ3GEY0R00	Carbon 0 ohm 1/16W
			R31	ERJ3GEY0R00	Carbon 0 ohm 1/16W
			R33	ERJ3GEYJ560	Carbon 56 ohms 1/16W
			R34	ERJ3GEYJ100	Carbon 10 ohms 1/16W
			R35	ERJ3GEYJ470	Carbon 47 ohms 1/16W
			R36	ERJ3GEY0R00	Carbon 0 ohm 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION			
R41-43	ERJ3GEYJ470	Carbon	47 ohms 1/16W	P2	K1MZ30B00002	30-pin Connector			
R47,48	ERJ3GEYJ150	Carbon	15 ohms 1/16W						
R49	ERJ3GEYJ103	Carbon	10K ohms 1/16W						
R50	ERJ3GEYJ223	Carbon	22K ohms 1/16W						
R51	ERJ3GEYJ333	Carbon	33K ohms 1/16W						
R52	ERJ3RHD133V	Metal	13K ohms 1/16W						
R53	ERJ3RHD622V	Metal	6.2K ohms 1/16W	PREAMP. BOARD					
R54	ERJ3RHD153V	Metal	15K ohms 1/16W						
R55	ERJ3RHD303V	Metal	30K ohms 1/16W	PCB2 (RTL)	YVWE600PKE1A	Printed Circuit Board Assy			
R56	ERJ3GEYJ102	Carbon	1K ohms 1/16W						
R57	ERJ3GEYJ331	Carbon	330 ohms 1/16W				U1	C0ABBA000025	IC
R60,61	ERJ3RHD103V	Metal	10K ohms 1/16W				U101,301	YWTC4W53FUL	IC
R62	ERJ3RHD912V	Metal	9.1K ohms 1/16W				U501	YWTC4W53FUL	IC
R63	ERJ3RHD822V	Metal	8.2K ohms 1/16W				Q1	2SB0766AHL	Transistor
R64	ERJ3GEYJ102	Carbon	1K ohms 1/16W	Q2	2SD0874AHL	Transistor			
R65	ERJ3GEYJ331	Carbon	330 ohms 1/16W	Q101	2SA15320CL	Transistor			
R68,69	ERJ3GEY0R00	Carbon	0 ohm 1/16W	Q102	2SC39310YL	Transistor			
R70,74	ERJ3GEYJ470	Carbon	47 ohms 1/16W	Q103	2SA15320CL	Transistor			
C1	F3H1A2260003	Tantalum	22 µF 10V	Q104	B1CFDA000001	FET			
C2	YWSK51A106MA	Tantalum	10 µF 10V	Q105	2SC39310YL	Transistor			
C3-8	YGM1F104Z1ET	Ceramic	0.1 µF	Q106	2SA15320CL	Transistor			
C10,11	YGM1F104Z1ET	Ceramic	0.1 µF	Q107	B1CFDA000001	FET			
C12	SK31V225MRB	Tantalum	10 µF 10V	Q108	2SC39310YL	Transistor			
C13	YWSK51A106MA	Tantalum	10 µF 10V	Q109	2SA15320CL	Transistor			
C14	YWSK41C106MB	Tantalum	10 µF 16V	Q110	B1CFDA000001	FET			
C15	YGM1F104Z1ET	Ceramic	0.1 µF	Q111,112	2SC39310YL	Transistor			
C17	SK41C336MC	Tantalum	33 µF 16V	Q113	2SD1819ARSTX	Transistor			
C18,19	F3H1A1070003	Tantalum	100 µF 10V	Q114	2SC39310YL	Transistor			
C20-23	YGM1F104Z1ET	Ceramic	0.1 µF	Q115	2SD1819ARSTX	Transistor			
C26	YGM1F104Z1ET	Ceramic	0.1 µF	Q116-118	2SA15320CL	Transistor			
C27	GRM9CH180J5H	Ceramic	18 pF	Q119	2SC39310YL	Transistor			
C29	F3H1E1060005	Tantalum	10 µF 25V	Q120-123	2SA15320CL	Transistor			
C30	SK41C336MC	Tantalum	33 µF 16V	Q124-127	2SC39310YL	Transistor			
C31	YGM1B103K1HT	Ceramic	0.01 µF	Q128	2SA15320CL	Transistor			
C32	GRM9B102K5H	Ceramic	1000 pF	Q302	2SC39310YL	Transistor			
C33-35	YGM2F104Z1HT	Ceramic	0.1 µF	Q303	2SA15320CL	Transistor			
C42	F3H1V6850002	Tantalum	6.8 µF 35V	Q304	B1CFDA000001	FET			
C43	YWSK51A106MA	Tantalum	10 µF 10V	Q305	2SC39310YL	Transistor			
C44	F3H1V6850002	Tantalum	6.8 µF 35V	Q306	2SA15320CL	Transistor			
C46	SK41C336MC	Tantalum	33 µF 16V	Q307	B1CFDA000001	FET			
C47	YWSK51A106MA	Tantalum	10 µF 10V	Q308	2SC39310YL	Transistor			
C48	SK41C336MC	Tantalum	33 µF 16V	Q309	2SA15320CL	Transistor			
C51,52	YGM1F105Z1AT	Ceramic	1 µF	Q310	B1CFDA000001	FET			
C53	F3H1A1070003	Tantalum	100 µF 10V	Q311,312	2SC39310YL	Transistor			
C54,55	YGM1F104Z1ET	Ceramic	0.1 µF	Q313	2SD1819ARSTX	Transistor			
X1	H0J283500005	Crystal Oscillator		Q314	2SC39310YL	Transistor			
L1	G1C4R7J00002	Coil		Q315	2SD1819ARSTX	Transistor			
E1-3	YWRCT2125TPV	Terminal Pin		Q316-318	2SA15320CL	Transistor			
E15	YWRCT2125TPV	Terminal Pin		Q319	2SC39310YL	Transistor			
P1	K1MM21B00003	21-pin Connector							

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
Q320-323	2SA15320CL	Transistor		R123	ERJ3GEY0R00	Carbon	0 ohms 1/16W
Q324-326	2SC39310YL	Transistor		R124	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
Q502	2SC39310YL	Transistor		R125	ERJ3GEYJ102	Carbon	1K ohms 1/16W
Q503	2SA15320CL	Transistor		R126	ERJ3GEYJ151	Carbon	150 ohms 1/16W
Q504	B1CFDA000001	FET		R127	EVM7JSW30B12	Variable Resistor	100 ohms
Q505	2SC39310YL	Transistor		R128	ERJ3GEYJ155	Carbon	1.5M ohms 1/16W
Q506	2SA15320CL	Transistor		R129	ERJ3GEYJ302	Carbon	3K ohms 1/16W
Q507	B1CFDA000001	FET		R130	ERJ3GEYJ102	Carbon	1K ohms 1/16W
Q508	2SC39310YL	Transistor		R131	ERJ3GEYJ221	Carbon	220 ohms 1/16W
Q509	2SA15320CL	Transistor		R132	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
Q510	B1CFDA000001	FET		R133	ERJ3GEY0R00	Carbon	0 ohms 1/16W
Q511,512	2SC39310YL	Transistor		R134	ERJ3GEYJ153	Carbon	15K ohms 1/16W
Q513	2SD1819ARSTX	Transistor		R135	ERJ3GEYJ561	Carbon	560 ohms 1/16W
Q514	2SC39310YL	Transistor		R136	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
Q515	2SD1819ARSTX	Transistor		R137	ERJ3GEYJ751	Carbon	750 ohms 1/16W
Q516-518	2SA15320CL	Transistor		R138	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
Q519	2SC39310YL	Transistor		R139	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
Q520-523	2SA15320CL	Transistor		R140	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
Q524-527	2SC39310YL	Transistor		R141,142	ERJ3GEYJ331	Carbon	330 ohms 1/16W
Q528	2SA15320CL	Transistor		R143	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R1,2	ERJ3RHD103V	Metal	10K ohms 1/16W	R144,145	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R3	ERJ3RHD123V	Metal	12K ohms 1/16W	R146	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R4	ERJ3RHD912V	Metal	9.1K ohms 1/16W	R147	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R5	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R148	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R6,7	ERJ3RHD103V	Metal	10K ohms 1/16W	R149	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R8	ERJ3RHD123V	Metal	12K ohms 1/16W	R150	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R9	ERJ3RHD912V	Metal	9.1K ohms 1/16W	R151,152	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R10	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R153	ERJ3GEYJ391	Carbon	390 ohms 1/16W
R12	ERJ3GEYJ203	Carbon	20K ohms 1/16W	R154	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R13	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R155	EVM7JGA00B23	Variable Resistor	2K ohms
R101,102	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R1565	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R103	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W	R157	ERJ3GEYJ391	Carbon	390 ohms 1/16W
R104	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R158	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R105	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R159	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R106	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R160	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R107	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R161	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R108	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R162	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R109	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R163	EVM7JGA00B23	Variable Resistor	2K ohms
R110	ERJ3GEYJ241	Carbon	240 ohms 1/16W	R165	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R111	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R167	ERJ3RHD912V	Metal	9.1K ohms 1/16W
R112	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W	R304	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R113	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R305	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R114	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R306	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R115	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R307	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R116	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R308	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R117	ERJ3GEYJ303	Carbon	30K ohms 1/16W	R309	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R118	ERJ3GEYJ220	Carbon	22 ohms 1/16W	R310	ERJ3GEYJ241	Carbon	240 ohms 1/16W
R119,120	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R311	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R121	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R312	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R122	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R313	ERJ3GEY0R00	Carbon	0 ohm 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R314	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R508	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R315	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R509	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R316	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R510	ERJ3GEYJ241	Carbon	240 ohms 1/16W
R317	ERJ3GEYJ303	Carbon	30K ohms 1/16W	R511	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R318	ERJ3GEYJ220	Carbon	22 ohms 1/16W	R512	ERJ3GEYJ242	Carbon	2.4K ohms 1/16W
R319,320	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R513	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R321	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R514	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R322	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R515	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R323	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R516	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R324	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R517	ERJ3GEYJ303	Carbon	30K ohms 1/16W
R325	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R518	ERJ3GEYJ220	Carbon	22 ohms 1/16W
R326	ERJ3GEYJ151	Carbon	150 ohms 1/16W	R519,520	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R327	EVM7JSW30B12	Variable Resistor	100 ohms	R521	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R328	ERJ3GEYJ155	Carbon	1.5M ohms 1/16W	R522	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R329	ERJ3GEYJ302	Carbon	3K ohms 1/16W	R523	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R330	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R524	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R331	ERJ3GEYJ221	Carbon	220 ohms 1/16W	R525	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R332	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R526	ERJ3GEYJ151	Carbon	150 ohms 1/16W
R333	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R527	EVM7JSW30B12	Variable Resistor	100 ohms
R334	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R528	ERJ3GEYJ155	Carbon	1.5M ohms 1/16W
R335	ERJ3GEYJ561	Carbon	560 ohms 1/16W	R529	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R336	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W	R530	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R337	ERJ3GEYJ751	Carbon	750 ohms 1/16W	R531	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R338	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R532	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R339	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W	R533	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R340	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W	R534	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R341,342	ERJ3GEYJ331	Carbon	330 ohms 1/16W	R535	ERJ3GEYJ561	Carbon	560 ohms 1/16W
R343	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W	R536	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R344,345	ERJ3GEYJ331	Carbon	330 ohms 1/16W	R537	ERJ3GEYJ751	Carbon	750 ohms 1/16W
R346	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W	R538	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R347	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R539	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W
R348	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R540	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R349	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R541,542	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R350	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R543	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R351,352	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R544,545	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R353	ERJ3GEYJ391	Carbon	390 ohms 1/16W	R546	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R354	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R547	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R355	EVM7JGA00B23	Variable Resistor	2K ohms	R548	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R356	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R549	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R357	ERJ3GEYJ391	Carbon	390 ohms 1/16W	R550	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R358	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R551,552	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R359	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R553	ERJ3GEYJ391	Carbon	390 ohms 1/16W
R360	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R554	ERJ3GEYJ511	Carbon	510 ohms 1/16W
R361	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R555	EVM7JGA00B23	Variable Resistor	2K ohms
R362	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R556	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R363	EVM7JGA00B23	Variable Resistor	2K ohms	R557	ERJ3GEYJ391	Carbon	390 ohms 1/16W
R504	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R558	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R505	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R559	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R506	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R560	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R507	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R561	ERJ3GEYJ101	Carbon	100 ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R562	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C321	F3F0J3360001	Tantalum	33 μ F 6.3V
R563	EVM7JGA00B23	Variable Resistor	2K ohms	C502	GRM9CH151J5H	Ceramic	150 pF
R565	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	C503	YGM1F104Z1ET	Ceramic	0.1 μ F
R567	ERJ3RHD912V	Metal	9.1K ohms 1/16W	C504	F3G1C2260001	Tantalum	22 μ F 16V
C1	YWSK41C686ME	Tantalum	68 μ F 16V	C505	GRM9CH180J5H	Ceramic	18 pF
C2	YWSK51A106MA	Tantalum	10 μ F 10V	C506	F1H1H150A004	Ceramic	15 pF
C3	SK21C225MRA	Electrolytic	2.2 μ F 16V	C507	GRM9CH180J5H	Ceramic	18 pF
C4	YGM1F104Z1ET	Ceramic	0.1 μ F	C508	F3F1C1060002	Tantalum	10 μ F 16V
C5-7	YWSK41C686ME	Tantalum	68 μ F 16V	C509	YGM1F104Z1ET	Ceramic	0.1 μ F
C8	F3G1A3360001	Tantalum	33 μ F 10V	C510	YGM1C390J1HT	Ceramic	39 pF
C9	YWSK51A106MA	Tantalum	10 μ F 10V	C511	YWSK51A106MA	Tantalum	10 μ F 10V
C10	SK21C225MRA	Electrolytic	2.2 μ F 16V	C512	GRM9CH151J5H	Ceramic	150 pF
C12	F3G1A3360001	Tantalum	33 μ F 10V	C513	SK31C476MRD0	Tantalum	47 μ F 16V
C101	YWSK51A106MA	Tantalum	10 μ F 10V	C514	YGM1C100D1HT	Ceramic	10 pF
C102	GRM9CH151J5H	Ceramic	150 pF	C515	F1H1H200A004	Ceramic	20 pF
C103	YGM1F104Z1ET	Ceramic	0.1 μ F	C516	YWSK51A106MA	Tantalum	10 μ F 10V
C104	F3G1C2260001	Tantalum	22 μ F 16V	C518,519	YGM1F104Z1ET	Ceramic	0.1 μ F
C105	GRM9CH180J5H	Ceramic	18 pF	C520	YWSK51A106MA	Tantalum	10 μ F 10V
C106	F1H1H150A004	Ceramic	15 pF	C521	F3F0J3360001	Tantalum	33 μ F 6.3V
C107	GRM9CH180J5H	Ceramic	18 pF	C522	YWSK51A106MA	Tantalum	10 μ F 10V
C108	F3F1C1060002	Tantalum	10 μ F 16V	L101,301	G1C2R7J00003	Coil	
C109	YGM1F104Z1ET	Ceramic	0.1 μ F	L501	G1C2R7J00003	Coil	
C110	YGM1C390J1HT	Ceramic	39 pF	CF101	YWCY4W092	Filter	
C111	YWSK51A106MA	Tantalum	10 μ F 10V	CF102	YWCY4W618	Filter	
C112	GRM9CH151J5H	Ceramic	150 pF	CF301	YWCY4W092	Filter	
C113	SK31C476MRD0	Tantalum	47 μ F 16V	CF302	YWCY4W618	Filter	
C114	YGM1C100D1HT	Ceramic	10 pF	CF501	YWCY4W092	Filter	
C115	F1H1H200A004	Ceramic	20 pF	CF502	YWCY4W618	Filter	
C116	YWSK51A106MA	Tantalum	10 μ F 10V	E7,101	YWRCT2125TPV	Terminal Pin	
C118,119	YGM1F104Z1ET	Ceramic	0.1 μ F	E102,103	YWRCT2125TPV	Terminal Pin	
C120	YWSK51A106MA	Tantalum	10 μ F 10V	E301-303	YWRCT2125TPV	Terminal Pin	
C121	F3F0J3360001	Tantalum	10 μ F 10V	E501-503	YWRCT2125TPV	Terminal Pin	
C122	YWSK51A106MA	Tantalum	10 μ F 10V	P1	K1MM16B00003	16-pin Connector	
C302	GRM9CH151J5H	Ceramic	150 pF	P2	K1MZ06B00001	6-pin Connector	
C303	YGM1F104Z1ET	Ceramic	0.1 μ F	P3	K1MZ10B00003	10-pin Connector	
C304	F3G1C2260001	Tantalum	22 μ F 16V				
C305	GRM9CH180J5H	Ceramic	18 pF				
C306	F1H1H150A004	Ceramic	15 pF				
C307	GRM9CH180J5H	Ceramic	18 pF				
C308	F3F1C1060002	Tantalum	10 μ F 16V				
C309	YGM1F104Z1ET	Ceramic	0.1 μ F				
C310	YGM1C390J1HT	Ceramic	39 pF				
C311	YWSK51A106MA	Tantalum	10 μ F 10V				
C312	GRM9CH151J5H	Ceramic	150 pF				
C313	SK31C476MRD0	Tantalum	47 μ F 16V				
C314	YGM1C100D1HT	Ceramic	10 pF				
C315	F1H1H200A004	Ceramic	20 pF				
C316	YWSK51A106MA	Tantalum	10 μ F 10V				
C318,319	YGM1F104Z1ET	Ceramic	0.1 μ F				
C320	YWSK51A106MA	Tantalum	10 μ F 10V				

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
PREPROCESS BOARD			Q207	B1GKCFAA0009	Transistor
			Q208	XN0643500L	Transistor
			Q210	2SA15320CL	Transistor
			Q211	2SK662-PQRTX	FET
			Q212	B1GKCFAA0009	Transistor
			Q213-216	XN0643500L	Transistor
			Q217,218	2SA15320CL	Transistor
			Q219	2SC39310YL	Transistor
			Q220	2SK662-PQRTX	FET
			Q221	XN0643500L	Transistor
			Q222	2SC39310YL	Transistor
			Q302	XN0653400L	Transistor
			Q303	2SC39310YL	Transistor
			Q304	2SK662-PQRTX	FET
			Q305	XN0653400L	Transistor
			Q306	XN0643500L	Transistor
			Q307	B1GKCFAA0009	Transistor
			Q308	XN0643500L	Transistor
			Q310	2SA15320CL	Transistor
			Q311	2SK662-PQRTX	FET
			Q312	B1GKCFAA0009	Transistor
			Q313-316	XN0643500L	Transistor
			Q317,318	2SA15320CL	Transistor
			Q319	2SC39310YL	Transistor
			Q320	2SK662-PQRTX	FET
			Q321	XN0643500L	Transistor
			Q322	2SC39310YL	Transistor
			D1,101	MA3J142K0L	Diode
			D201,301	MA3J142K0L	Diode
			R1	ERJ3GEYJ334	Carbon 330K ohms 1/16W
			R2	ERJ3GEYJ224	Carbon 220K ohms 1/16W
			R3	ERJ3GEYJ333	Carbon 33K ohms 1/16W
			R4	ERJ3GEYJ203	Carbon 20K ohms 1/16W
			R5	ERJ3GEYJ334	Carbon 330K ohms 1/16W
			R6	ERJ3GEYJ224	Carbon 220K ohms 1/16W
			R7	ERJ3GEYJ103	Carbon 10K ohms 1/16W
			R8	ERJ3GEYJ102	Carbon 1K ohms 1/16W
			R9-13	ERJ3RHD473V	Metal 47K ohms 1/16W
			R14	ERJ3RHD513V	Metal 51K ohms 1/16W
			R15	ERJ3RHD473V	Metal 47K ohms 1/16W
			R16	ERJ3RHD393V	Metal 39K ohms 1/16W
			R17	ERJ3GEYJ102	Carbon 1K ohms 1/16W
			R18,19	ERJ3GEYJ101	Carbon 100 ohms 1/16W
			R20	ERJ3GEYJ102	Carbon 1K ohms 1/16W
			R21,22	ERJ3RHD473V	Metal 47K ohms 1/16W
			R24	ERJ3RHD623V	Metal 62K ohms 1/16W
			R25	ERJ3GEYJ102	Carbon 1K ohms 1/16W
			R26	ERJ3GEYJ101	Carbon 100 ohms 1/16W
			R27	ERJ3RHD103V	Metal 10K ohms 1/16W
			R29	ERJ3GEYJ102	Carbon 1K ohms 1/16W
PCB3 (RTL)	WE600PKZ2A	Printed Circuit Board Assy			
U1	YWMC14053BF	IC			
U2	NJM2902M	IC			
U3	NJM4560M	IC			
U5	YWTC4W53FUL	IC			
U6	NJM2059M	IC			
U7	C5AB00000001	IC			
U8	C0JBAA000148	IC			
U101	YWMC14053BF	IC			
U102,103	NJM4559M	IC			
U104,105	NJM4560M	IC			
U108	YWTC4W53FUL	IC			
U201	YWMC14053BF	IC			
U202,203	NJM4559M	IC			
U204,205	NJM4560M	IC			
U208	YWTC4W53FUL	IC			
U301	YWMC14053BF	IC			
U302,303	NJM4559M	IC			
U304,305	NJM4560M	IC			
U308	YWTC4W53FUL	IC			
Q1	2SB07660HL	Transistor			
Q2	2SD874-RS	Transistor			
Q3	2SB07660HL	Transistor			
Q4,5	2SB1218-QRS	Transistor			
Q102	XN0653400L	Transistor			
Q103	2SC39310YL	Transistor			
Q104	2SK662-PQRTX	FET			
Q105	XN0653400L	Transistor			
Q106	XN0643500L	Transistor			
Q107	B1GKCFAA0009	Transistor			
Q108	XN0643500L	Transistor			
Q110	2SA15320CL	Transistor			
Q111	2SK662-PQRTX	FET			
Q112	B1GKCFAA0009	Transistor			
Q113-116	XN0643500L	Transistor			
Q117,118	2SA15320CL	Transistor			
Q119	2SC39310YL	Transistor			
Q120	2SK662-PQRTX	FET			
Q121	XN0643500L	Transistor			
Q122	2SC39310YL	Transistor			
Q202	XN0653400L	Transistor			
Q203	2SC39310YL	Transistor			
Q204	2SK662-PQRTX	FET			
Q205	XN0653400L	Transistor			
Q206	XN0643500L	Transistor			

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R30	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W	R148	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R32	ERJ3RHD563V	Metal	56K ohms 1/16W	R149	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R33,34	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R150	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R88	ERJ3GEYJ333	Carbon	33K ohms 1/16W	R151,152	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R89	ERJ3RHD472V	Metal	4.7K ohms 1/16W	R153	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R90	ERJ3RHD751V	Metal	750 ohms 1/16W	R154	ERJ3GEYJ823	Carbon	82K ohms 1/16W
R91	ERJ3RHD102V	Metal	1K ohms 1/16W	R155	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
R92	ERJ3RHD121V	Metal	120 ohms 1/16W	R156	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R93	ERJ3RHD331V	Metal	330 ohms 1/16W	R157	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R94	ERJ3GEYF470	Carbon	47 ohms 1/16W	R158	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R95	ERJ3RHD181V	Metal	180 ohms 1/16W	R160	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R96	ERJ3GEYF470	Carbon	47 ohms 1/16W	R161	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R97	ERJ3RHD101V	Metal	100 ohms 1/16W	R162	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R98	ERJ3GEYF150	Carbon	15 ohms 1/16W	R163	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R103	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R164	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R104,105	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	R165	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R106,107	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R166	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R108	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R167	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R109	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R168	ERJ3RHD153V	Metal	15K ohms 1/16W
R110	ERJ3GEYJ100	Carbon	10 ohms 1/16W	R169	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R111,112	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R170	ERJ3GEYJ914	Carbon	910K ohms 1/16W
R114-116	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R171	ERJ3RHD203V	Metal	20K ohms 1/16W
R117	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R172	ERJ3RHD432V	Metal	4.3K ohms 1/16W
R118	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R173	ERJ3RHD512V	Metal	5.1K ohms 1/16W
R119	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R174	ERJ3RHD751V	Metal	750 ohms 1/16W
R120	ERJ3GEYJ333	Carbon	33K ohms 1/16W	R175	ERJ3RHD683V	Metal	68K ohms 1/16W
R121	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	R176	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R123	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R177	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R124	ERJ3GEYJ820	Carbon	82 ohms 1/16W	R178	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R125	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R179,180	ERJ3RHD471V	Metal	470 ohms 1/16W
R126	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R181	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R127,128	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W	R182	ERJ3RHD242V	Metal	2.4K ohms 1/16W
R129	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R183	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R130	ERJ3GEYJ112	Carbon	1.1K ohms 1/16W	R184	ERJ3RHD202V	Metal	2K ohms 1/16W
R131	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W	R185	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R132	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R186	ERJ3RHD102V	Metal	1K ohms 1/16W
R133	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R187	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R134	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R188	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R135	ERJ3GEYJ471	Carbon	470 ohms 1/16W	R189	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R136	ERJ3GEYJ681	Carbon	680 ohms 1/16W	R190	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R137	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R191	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R138	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R192	ERJ3RHD222V	Metal	2.2K ohms 1/16W
R139	ERJ3GEYJ203	Carbon	20K ohms 1/16W	R197	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R140	ERJ3GEYJ683	Carbon	68K ohms 1/16W	R198	ERJ3GEYJ121	Carbon	120 ohms 1/16W
R142	ERJ3GEYJ563	Carbon	56K ohms 1/16W	R199	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R143	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R203	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R144	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R204,205	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R145	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R206,207	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R146	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R208	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R147	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R209	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R210	ERJ3GEYJ100	Carbon	10 ohms 1/16W	R269	ERJ3GEYJ331	Carbon	330 ohms 1/16W
R211,212	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R270	ERJ3GEYJ914	Carbon	910K ohms 1/16W
R214-216	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R271	ERJ3RHD203V	Metal	20K ohms 1/16W
R217	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R272	ERJ3RHD432V	Metal	4.3K ohms 1/16W
R218	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R273	ERJ3RHD512V	Metal	5.1K ohms 1/16W
R219	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R274	ERJ3RHD751V	Metal	750 ohms 1/16W
R220	ERJ3GEYJ333	Carbon	33K ohms 1/16W	R275	ERJ3RHD683V	Metal	68K ohms 1/16W
R221	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	R276	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R223	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R277	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R224	ERJ3GEYJ820	Carbon	82 ohms 1/16W	R278	ERJ3GEYJ153	Carbon	15K ohms 1/16W
R225	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R279,280	ERJ3RHD471V	Metal	470 ohms 1/16W
R226	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R281	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R227,228	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W	R282	ERJ3RHD242V	Metal	2.4K ohms 1/16W
R229	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R283	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R230	ERJ3GEYJ112	Carbon	1.1K ohms 1/16W	R284	ERJ3RHD202V	Metal	2K ohms 1/16W
R231	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W	R285	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R232	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R286	ERJ3RHD102V	Metal	1K ohms 1/16W
R233	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R287	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R234	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R288	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R235	ERJ3GEYJ471	Carbon	470 ohms 1/16W	R289	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R236	ERJ3GEYJ681	Carbon	680 ohms 1/16W	R290	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R237	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R291	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R238	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R292	ERJ3RHD222V	Metal	2.2K ohms 1/16W
R239	ERJ3GEYJ203	Carbon	20K ohms 1/16W	R297	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R240	ERJ3GEYJ683	Carbon	68K ohms 1/16W	R298	ERJ3GEYJ121	Carbon	120 ohms 1/16W
R242	ERJ3GEYJ563	Carbon	56K ohms 1/16W	R299	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R243	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R303	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R244	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R304,305	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R245	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R306,307	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R246	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R308	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R247	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R309	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R248	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R310	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R249	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R311,312	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R250	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W	R314-316	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R251,252	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R317	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R253	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W	R318	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R254	ERJ3GEYJ823	Carbon	82K ohms 1/16W	R319	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R255	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R320	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R256	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R321	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R257	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R323	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R258	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R324	ERJ3GEYJ820	Carbon	82 ohms 1/16W
R260	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R325	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R261	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R326	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
R262	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R327,328	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R263	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R329	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R264	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R330	ERJ3GEYJ112	Carbon	1.1K ohms 1/16W
R265	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R331	ERJ3GEYJ822	Carbon	8.2K ohms 1/16W
R266	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R332	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R267	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R333	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R268	ERJ3RHD153V	Metal	15K ohms 1/16W	R334	ERJ3GEY0R00	Carbon	0 ohm 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R335	ERJ3GEYJ471	Carbon	470 ohms 1/16W	R389	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R336	ERJ3GEYJ681	Carbon	680 ohms 1/16W	R390	ERJ3GEYJ183	Carbon	18K ohms 1/16W
R337	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R391	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R338	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R392	ERJ3RHD222V	Metal	2.2K ohms 1/16W
R339	ERJ3GEYJ203	Carbon	20K ohms 1/16W	R397	ERJ3GEYJ223	Carbon	22K ohms 1/16W
R340	ERJ3GEYJ683	Carbon	68K ohms 1/16W	R398	ERJ3GEYJ121	Carbon	100 ohms 1/16W
R342	ERJ3GEYJ563	Carbon	56K ohms 1/16W	R399	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R343	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R701	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R344	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R702	ERJ3GEYJ333	Carbon	33K ohms 1/16W
R345	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R703	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R346	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R706	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R347	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R721	ERJ3RHD132V	Metal	1.3K ohms 1/16W
R348	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R722	ERJ3RHD203V	Metal	20K ohms 1/16W
R349	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R723	ERJ3GEYF510	Carbon	51 ohms 1/16W
R350	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W	R724	ERJ3RHD122V	Metal	1.2K ohms 1/16W
R351,352	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R725	ERJ3RHD182V	Metal	1.8K ohms 1/16W
R353	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W	R726	ERJ3RHD433V	Metal	43K ohms 1/16W
R354	ERJ3GEYJ823	Carbon	82K ohms 1/16W	R727,728	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R355	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W	R730	ERJ3RHD393V	Metal	39K ohms 1/16W
R356	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R731	ERJ3RHD203V	Metal	20K ohms 1/16W
R357	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R732	ERJ3RHD103V	Metal	10K ohms 1/16W
R358	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	R733	ERJ3RHD472V	Metal	4.7K ohms 1/16W
R360	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C1	YGM1F105Z1AT	Ceramic	1 μ F
R361	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C2	GRM9CH151J5H	Ceramic	150 pF
R362	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C3	YGM1F104Z1ET	Ceramic	0.1 μ F
R363	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C4	YGM1B103K1HT	Ceramic	0.01 μ F
R364	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C7,8	YGM1F104Z1ET	Ceramic	0.1 μ F
R365	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C9	SK41C336MC	Tantalum	33 μ F 16V
R366	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C11	SK41C336MC	Tantalum	33 μ F 16V
R367	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C12	YGM1F104Z1ET	Ceramic	0.1 μ F
R368	ERJ3RHD153V	Metal	15K ohms 1/16W	C13	SK41C336MC	Tantalum	33 μ F 16V
R369	ERJ3GEYJ331	Carbon	330 ohms 1/16W	C14	SK41A107ME	Tantalum	100 μ F 10V
R370	ERJ3GEYJ914	Carbon	910K ohms 1/16W	C15	YGM1F104Z1ET	Ceramic	0.1 μ F
R371	ERJ3RHD203V	Metal	20K ohms 1/16W	C16	YWSK41A476MC	Tantalum	47 μ F 10V
R372	ERJ3RHD432V	Metal	4.3K ohms 1/16W	C21-24	SK21A225KRA	Tantalum	2.2 μ F 10V
R373	ERJ3RHD512V	Metal	5.1K ohms 1/16W	C25-32	YGM1F104Z1ET	Ceramic	0.1 μ F
R374	ERJ3RHD751V	Metal	750 ohms 1/16W	C33-35	YGM1F105Z1AT	Ceramic	1 μ F
R375	ERJ3RHD683V	Metal	68K ohms 1/16W	C102	YGM1F104Z1ET	Ceramic	0.1 μ F
R376	ERJ3GEYJ223	Carbon	22K ohms 1/16W	C104	YGM1C020C1HT	Ceramic	2 pF
R377	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C105,106	YGM1F105Z1AT	Ceramic	1 μ F
R378	ERJ3GEYJ153	Carbon	15K ohms 1/16W	C109	F3G1C1560001	Tantalum	15 μ F 16V
R379,380	ERJ3RHD471V	Metal	470 ohms 1/16W	C110	F1H1H471A004	Ceramic	470 pF
R381	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C111	YGM1F104Z1ET	Ceramic	0.1 μ F
R382	ERJ3RHD242V	Metal	2.4K ohms 1/16W	C112	F3G1C1560001	Tantalum	15 μ F 16V
R383	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C113	GRM9CJ030C5H	Ceramic	3 pF
R384	ERJ3RHD202V	Metal	2K ohms 1/16W	C114	YGM1F104Z1ET	Ceramic	0.1 μ F
R385	ERJ3GEYJ223	Carbon	22K ohms 1/16W	C115	SK40G107MC	Tantalum	100 μ F 4V
R386	ERJ3RHD102V	Metal	1K ohms 1/16W	C116	F3G1C1560001	Tantalum	15 μ F 16V
R387	ERJ3GEYJ223	Carbon	22K ohms 1/16W	C118	YGM1F105Z1AT	Ceramic	1 μ F
R388	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W	C119	YGM1F104Z1ET	Ceramic	0.1 μ F

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C120	YGM1B103K1HT	Ceramic	0.01 μ F	C331	F3G1C1560001	Tantalum	15 μ F 16V
C121-126	YGM1F104Z1ET	Ceramic	0.1 μ F	C332	YGM1B103K1HT	Ceramic	0.01 μ F
C127	F3G1C1560001	Tantalum	15 μ F 16V	C334	F3G1C1560001	Tantalum	15 μ F 16V
C128	GRM9CH270J5H	Ceramic	27 pF	C335	YGM1F104Z1ET	Ceramic	0.1 μ F
C131	F3G1C1560001	Tantalum	15 μ F 16V	C336	F3G1C1560001	Tantalum	15 μ F 16V
C132	YGM1B103K1HT	Ceramic	0.01 μ F	C337-341	YGM1F104Z1ET	Ceramic	0.1 μ F
C134	F3G1C1560001	Tantalum	15 μ F 16V	S1	SKHHLS	Push Switch	
C135	YGM1F104Z1ET	Ceramic	0.1 μ F	S2	SKHHLR	Push Switch	
C136	F3G1C1560001	Tantalum	15 μ F 16V	S3,4	SKHHLQ	Push Switch	
C137-141	YGM1F104Z1ET	Ceramic	0.1 μ F	E1,101	YWRCT2125TPV	Test-Pin	
C202	YGM1F104Z1ET	Ceramic	0.1 μ F	E102-105	YWRCT2125TPV	Test-Pin	
C204	GRM9CH050C5H	Ceramic	5 pF	E201-205	YWRCT2125TPV	Test-Pin	
C205,206	YGM1F105Z1AT	Ceramic	1 μ F	E301-305	YWRCT2125TPV	Test-Pin	
C209	F3G1C1560001	Tantalum	15 μ F 16V	P1	K1MR70B00002	70-pin Connector	
C210	F1H1H471A004	Ceramic	470 pF	JOINT BOARD			
C211	YGM1F104Z1ET	Ceramic	0.1 μ F	PCB4 (RTL)	YWWE600PKD2A	Printed Circuit Board Assy	
C212	F3G1C1560001	Tantalum	15 μ F 16V	U1	YWMC14053BF	IC	
C213	GRM9CJ030C5H	Ceramic	3 pF	R1	ERJ3GEYJ104	Carbon	100K ohms 1/16W
C214	YGM1F104Z1ET	Ceramic	0.1 μ F	C1	YGM1F104Z1ET	Ceramic	0.1 μ F
C215	SK40G107MC	Tantalum	100 μ F 4V	P1	K1MR70B00001	70-pin Connector	
C216	F3G1C1560001	Tantalum	15 μ F 16V	P2	K1MR70B00002	70-pin Connector	
C218	YGM1F105Z1AT	Ceramic	1 μ F	P3	PANB1A061	12-pin Connector	
C219	YGM1F104Z1ET	Ceramic	0.1 μ F	P4	K1MR70B00002	70-pin Connector	
C220	YGM1B103K1HT	Ceramic	0.01 μ F	P5	K1MR70B00002	70-pin Connector	
C221-226	YGM1F104Z1ET	Ceramic	0.1 μ F	P6	PANB1A061	12-pin Connector	
C227	F3G1C1560001	Tantalum	15 μ F 16V	P7	K1MR70B00001	70-pin Connector	
C228	GRM9CH270J5H	Ceramic	27 pF	P8	K1KA12B00002	12-pin Connector	
C231	F3G1C1560001	Tantalum	15 μ F 16V	P9	K1MR70B00001	70-pin Connector	
C232	YGM1B103K1HT	Ceramic	0.01 μ F	P10	K1MM21B00004	21-pin Connector	
C234	F3G1C1560001	Tantalum	15 μ F 16V	P11	K1MM16B00004	16-pin Connector	
C235	YGM1F104Z1ET	Ceramic	0.1 μ F	P12	K1MZ06B00001	6-pin Connector	
C236	F3G1C1560001	Tantalum	15 μ F 16V	DSP / ENCODER BOARD			
C237-241	YGM1F104Z1ET	Ceramic	0.1 μ F	PCB5 (RTL)	WE600PKZ1A	Printed Circuit Board Assy	
C302	YGM1F104Z1ET	Ceramic	0.1 μ F	U1	YWM51957BFP	IC	
C304	YGM1C020C1HT	Ceramic	2 pF	U5	YWBR9040FT1	IC	
C305,306	YGM1F105Z1AT	Ceramic	1 μ F	U3	C3FBEZ000002	IC	
C309	F3G1C1560001	Tantalum	15 μ F 16V	U4	COJBAA000148	IC	
C310	F1H1H471A004	Ceramic	470 pF				
C311	YGM1F104Z1ET	Ceramic	0.1 μ F				
C312	F3G1C1560001	Tantalum	15 μ F 16V				
C313	GRM9CJ030C5H	Ceramic	3 pF				
C314	YGM1F104Z1ET	Ceramic	0.1 μ F				
C315	SK40G107MC	Tantalum	100 μ F 4V				
C316	F3G1C1560001	Tantalum	15 μ F 16V				
C318	YGM1F105Z1AT	Ceramic	1 μ F				
C319	YGM1F104Z1ET	Ceramic	0.1 μ F				
C320	YGM1B103K1HT	Ceramic	0.01 μ F				
C321-326	YGM1F104Z1ET	Ceramic	0.1 μ F				
C327	F3G1C1560001	Tantalum	15 μ F 16V				
C328	GRM9CH270J5H	Ceramic	27 pF				

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION	
U6	YWMC74AC138M	IC	Q27	2SB1218-QRS	Transistor	
U7	UPD6465GT611	IC	Q28,29	B1ABCF000059	Transistor	
U9	YWM62352GP	IC	Q30-33	2SC39310YL	Transistor	
U10-12	MN6577H	IC	Q34	XP0460100L	Transistor	
U15	NJM2904M	IC	Q35	B1ABCF000059	Transistor	
U16	MC14053BF	IC	Q36	2SC39310YL	Transistor	
U17	MC74HC08AF	IC	Q37	B1ABCF000059	Transistor	
U18	YWTC7W14FUL	IC	Q38	2SC39310YL	Transistor	
U19	YWNJM4556AM	IC	Q39	B1ABCF000059	Transistor	
U20	NJM2903M	IC	Q40-42	2SC39310YL	Transistor	
U21	YWTC7W14FUL	IC	Q43	XP0460100L	Transistor	
U25	YWMC145407F	IC	Q44	2SB1218-QRS	Transistor	
U29	YWVY21008	IC	Q45,46	B1ABCF000059	Transistor	
U30	F432532APGF	IC	Q47-49	2SC39310YL	Transistor	
U31	C0JBAB000220	IC	Q50	XP0460100L	Transistor	
U35	YWTC7SH08FUL	IC	Q51	2SD18200WL	Transistor	
U36	C0JBAB000175	IC	Q52	2SB1219AHL	Transistor	
U37	YWMB40950	IC	Q53	2SD18200WL	Transistor	
U38	NJM2902M	IC	Q54	2SB1219AHL	Transistor	
U39	YWLM1881M	IC	Q55	2SD18200WL	Transistor	
U40	C0JBAB000005	IC	Q56	2SB1219AHL	Transistor	
U41	C0JBAA000148	IC	Q57	B1ABCF000059	Transistor	
U42	C0JBAB000004	IC	D1	MA3J142K0L	Diode	
U44	C0JBAB000005	IC	D2,3	MA3J14300L	Diode	
U47,52	C0JBAB000003	IC	D4-7	YWHVU359TRF	Diode	
U48	YULLW0106	IC	D10,11	MA3J14300L	Diode	
U49	C0JBAZ000025	IC	R1	ERJ3GEYJ473	Carbon	47K ohms 1/16W
U50	YULLW0106	IC	R2	ERJ3GEY0R00	Carbon	0 ohm 1/16W
U51	YWTC7SH08FUL	IC	R7,9	ERJ3GEYJ473	Carbon	47K ohms 1/16W
U53	YWTC7SH32FUL	IC	R13-15	ERJ3GEY0R00	Carbon	0 ohm 1/16W
U422	C0JBAB000220	IC	R17	ERJ3GEYJ682	Carbon	6.8K ohms 1/16W
U423	C0JBAZ000280	IC	R18	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
Q3	IMZ1T9	Transistor	R19-42	ERJ3GEYJ220	Carbon	22 ohms 1/16W
Q4	XP0460100L	Transistor	R49	ERJ3GEYJ470	Carbon	47 ohms 1/16W
Q5	B1ABAC000008	Transistor	R50	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
Q6,7	2SK106945TL	FET	R51,52	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
Q12	XP0460100L	Transistor	R53-58	ERJ3GEYJ101	Carbon	100 ohms 1/16W
Q13	2SB07660HL	Transistor	R59	ERJ3GEYJ433	Carbon	43K ohms 1/16W
Q14	B1ABCF000059	Transistor	R60,61	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
Q15	2SB07660HL	Transistor	R62	ERJ3GEYJ433	Carbon	43K ohms 1/16W
Q16	B1ABCF000059	Transistor	R63,64	ERJ3GEYJ103	Carbon	10K ohms 1/16W
Q17	2SB07660HL	Transistor	R65	ERJ3GEYJ470	Carbon	47 ohms 1/16W
Q18	B1ABCF000059	Transistor	R66	ERJ3GEYJ202	Carbon	2K ohms 1/16W
Q19	2SB07660HL	Transistor	R67,68	ERJ3GEY0R00	Carbon	0 ohm 1/16W
Q20	B1ABCF000059	Transistor	R69,70	ERJ3GEYJ473	Carbon	47K ohms 1/16W
Q21	2SD1819-QRS	Transistor	R71	ERJ3GEYJ101	Carbon	100 ohms 1/16W
Q22	2SB1218-QRS	Transistor	R72,73	ERJ3GEYJ222	Carbon	2.2K ohms 1/16W
Q23,24	2SC39310YL	Transistor	R74	ERJ3GEYJ510	Carbon	51 ohms 1/16W
Q25	2SB1218-QRS	Transistor	R75	ERJ3GEYJ101	Carbon	100 ohms 1/16W
Q26	B1ABCF000059	Transistor	R76	ERJ3GEYJ104	Carbon	100K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R77	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R180	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R78	ERJ3GEYJ513	Carbon	51K ohms 1/16W	R181	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R79	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R182	ERJ3GEYJ750	Carbon	75 ohms 1/16W
R80	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	R183	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W
R82,83	ERJ3GEYJ221	Carbon	220 ohms 1/16W	R184	ERJ3GEYJ303	Carbon	30K ohms 1/16W
R84,85	ERJ3GEYJ104	Carbon	100K ohms 1/16W	R185	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R96	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R186	ERJ3GEYJ684	Carbon	680K ohms 1/16W
R97	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R187	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R98	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W	R188	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R99	ERJ3GEYJ105	Carbon	1M ohms 1/16W	R189	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R100,101	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R190	ERJ3GEYJ220	Carbon	22 ohms 1/16W
R103	ERJ3GEYJ752	Carbon	7.5K ohms 1/16W	R191	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R104,105	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R192	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R111	ERJ3GEYJ105	Carbon	1M ohms 1/16W	R193	ERJ3GEYJ560	Carbon	56 ohms 1/16W
R112,113	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R194,195	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R118	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R196	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R120	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R197,198	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R121	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R199	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W
R122	ERJ3GEYJ561	Carbon	560 ohms 1/16W	R200	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R123	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W	R201-203	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R124	ERJ3GEYJ471	Carbon	470 ohms 1/16W	R204	ERJ3GEYJ272	Carbon	2.7K ohms 1/16W
R125	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R205,206	ERJ3RHD911V	Metal	910 ohms 1/16W
R126	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R207	ERJ3RHD272V	Metal	2.7K ohms 1/16W
R131	ERJ3GEYJ473	Carbon	47K ohms 1/16W	R208	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R132,133	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R209	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R134,135	ERJ3GEYJ225	Carbon	2.2M ohms 1/16W	R210	ERJ3GEYJ362	Carbon	3.6K ohms 1/16W
R138	ERJ3GEYJ363	Carbon	36K ohms 1/16W	R211	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R139	ERJ3GEYJ153	Carbon	15K ohms 1/16W	R212	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R152	ERJ3RHD431V	Metal	430 ohms 1/16W	R213	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R153	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W	R214	ERJ3RHD472V	Metal	4.7K ohms 1/16W
R155	ERJ3GEYJ100	Carbon	10 ohms 1/16W	R215	ERJ3RHD202V	Metal	2K ohms 1/16W
R156	ERJ3GEYJ241	Carbon	240 ohms 1/16W	R216	ERJ3RHD911V	Metal	910 ohms 1/16W
R158	ERJ3RHD203V	Metal	20K ohms 1/16W	R217	ERJ3RHD222V	Metal	2.2K ohms 1/16W
R159	ERJ3RHD153V	Metal	15K ohms 1/16W	R218-221	ERJ3GEYJ100	Carbon	10 ohms 1/16W
R160	ERJ3RHD152V	Metal	1.5K ohms 1/16W	R222	ERJ3GEYJ680	Carbon	68 ohms 1/16W
R161	ERJ3RHD182V	Metal	1.8K ohms 1/16W	R223,224	ERJ3GEYJ221	Carbon	220 ohms 1/16W
R162	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R225	ERJ3GEYJ202	Carbon	2Kohms 1/16W
R163	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R226,227	ERJ3RHD562V	Metal	5.6K ohms 1/16W
R166	ERJ3RHD302V	Metal	3K ohms 1/16W	R228	ERJ3RHD272V	Metal	2.7K ohms 1/16W
R167	ERJ3RHD202V	Metal	2K ohms 1/16W	R229	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R168	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R230	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R169	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R231	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R172	ERJ3RHD302V	Metal	3K ohms 1/16W	R232	ERJ3RHD272V	Metal	2.7K ohms 1/16W
R173	ERJ3RHD202V	Metal	2K ohms 1/16W	R233	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W
R174	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R234	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R175	ERJ3GEYJ101	Carbon	100 ohms 1/16W	R235	ERJ3GEYJ362	Carbon	3.6K ohms 1/16W
R176	ERJ3RHD183V	Metal	18K ohms 1/16W	R236	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R177	ERJ3RHD102V	Metal	1K ohms 1/16W	R237	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R177,178	ERJ3RHD103V	Metal	10K ohms 1/16W	R238	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W
R179	ERJ3RHD202V	Metal	2K ohms 1/16W	R239	ERJ3RHD682V	Metal	6.8K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
R240	ERJ3RHD202V	Metal	2K ohms 1/16W	R404,405	ERJ8GEY0R00	Carbon	0 ohm 1/16W
R241	ERJ3RHD911V	Metal	910 ohms 1/16W	R407	ERJ8GEY0R00	Carbon	0 ohm 1/16W
R242	ERJ3RHD222V	Metal	2.2K ohms 1/16W	R410	ERDS2TJ564	Carbon	560K ohms 1/16W
R243-246	ERJ3GEYJ100	Carbon	10 ohms 1/16W	R411	ERDS2TJ105	Carbon	1M ohms 1/16W
R247	ERJ3GEYJ680	Carbon	68 ohms 1/16W	R413,417	ERJ3GEY0R00	Carbon	0 ohm 1/16W
R248	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	C1	YGM1F105Z1AT	Ceramic	1 µF
R249	ERJ3GEYJ392	Carbon	3.9K ohms 1/16W	C9	YGM1F104Z1ET	Ceramic	0.1 µF
R250	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	C11	YWSK51A106MA	Tantalum	10 µF 10V
R251	ERJ3GEYJ102	Carbon	1K ohms 1/16W	C12	YGM1B103K1HT	Ceramic	0.01 µF
R252	ERJ3GEYJ562	Carbon	5.6K ohms 1/16W	C13-16	YGM1F104Z1ET	Ceramic	0.1 µF
R253	ERJ3GEYJ182	Carbon	1.8K ohms 1/16W	C17	F1H1H300A004	Ceramic	30 pF
R254	ERJ3GEYJ221	Carbon	220 ohms 1/16W	C18	YGM1F104Z1ET	Ceramic	0.1 µF
R255	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C19	GRM9CH101J5H	Ceramic	100 pF
R256	ERJ3GEYJ202	Carbon	2Kohms 1/16W	C21	SK41C336MC	Tantalum	33 µF 16V
R257	ERJ3GEYJ102	Carbon	1K ohms 1/16W	C22,24	YGM1F104Z1ET	Ceramic	0.1 µF
R258,259	ERJ3RHD391V	Metal	390 ohms 1/16W	C26-28	YGM1F104Z1ET	Ceramic	0.1 µF
R260	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	C30-56	YGM1F104Z1ET	Ceramic	0.1 µF
R261,262	ERJ3RHD473V	Metal	47K ohms 1/16W	C57	YWSK41A476MC	Tantalum	47 µF 10V
R263	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C58	GRM9CH101J5H	Ceramic	100 pF
R264	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C59	YGM1F104Z1ET	Ceramic	0.1 µF
R265	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W	C60	F3H0J2260003	Tantalum	22 µF 6.3V
R266	ERJ3RHD682V	Metal	6.8K ohms 1/16W	C62	GRM9B102K5H	Ceramic	1000 pF
R267	ERJ3RHD202V	Metal	2K ohms 1/16W	C63	F3H1A2260003	Tantalum	22 µF 10V
R268	ERJ3RHD911V	Metal	910 ohms 1/16W	C64	GRM9CH101J5H	Ceramic	100 pF
R269	ERJ3RHD222V	Metal	2.2K ohms 1/16W	C66-69	SK31E106KRC	Tantalum	10 µF 25V
R270-273	ERJ3GEYJ100	Carbon	10 ohms 1/16W	C70	YGM1F104Z1ET	Ceramic	0.1 µF
R275	ERJ3GEYJ680	Carbon	68 ohms 1/16W	C71	YGM1C470J1HT	Ceramic	47 pF
R276	ERJ3GEYJ103	Carbon	10K ohms 1/16W	C73	YGM1F104Z1ET	Ceramic	0.1 µF
R277	ERJ3GEYJ203	Carbon	20K ohms 1/16W	C74-76	YGM1F104Z1ET	Ceramic	0.1 µF
R280	ERJ3GEYJ220	Carbon	22 ohms 1/16W	C77	YWSK40J686MC	Tantalum	68 µF 6.3V
R281	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C78-81	YGM1F104Z1ET	Ceramic	0.1 µF
R283	EVM7JSW30B14	Variable Resistor	10K ohms	C82-84	SK31A475KRA	Tantalum	4.7 µF 10V
R290,291	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C85	YGM1F104Z1ET	Ceramic	0.1 µF
R293	ERJ3GEYJ101	Carbon	100 ohms 1/16W	C86	YWSK40J686MC	Tantalum	68 µF 6.3V
R294	ERJ3GEYJ220	Carbon	22 ohms 1/16W	C87-90	SK31A475KRA	Tantalum	4.7 µF 10V
R299	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C92	YGM1F104Z1ET	Ceramic	0.1 µF
R300	ERJ3RHD331V	Metal	330 ohms 1/16W	C93	YGM1F104Z1ET	Ceramic	0.1 µF
R301	ERJ3RHD201V	Metal	200 ohms 1/16W	C94	GRM9CH150J5H	Ceramic	15 pF
R302,303	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C95,96	YGM1B103K1HT	Ceramic	0.01 µF
R304,305	ERJ3RHD912V	Metal	9.1K ohms 1/16W	C97	YGM1C470J1HT	Ceramic	47 pF
R306,307	ERJ3GEYJ820	Carbon	82 ohms 1/16W	C98,99	YGM1C151J1HT	Ceramic	150 pF
R308-311	ERJ3GEYJ473	Carbon	47K ohms 1/16W	C105,107	YGM1F104Z1ET	Ceramic	0.1 µF
R313	ERJ3GEYJ183	Carbon	18K ohms 1/16W	C108	K216A1R0R	Electrolytic	1 µF 16V
R314	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C109	5X122K5VT	Ceramic	1200 pF
R315	ERJ3GEYJ473	Carbon	47K ohms 1/16W	C111	YGM1F104Z1ET	Ceramic	0.1 µF
R316	ERJ3GEYJ681	Carbon	680 ohms 1/16W	C112	SK21A225KRA	Tantalum	2.2 µF 10V
R320,321	ERJ3RHD103V	Metal	10K ohms 1/16W	C113	YGM1B103K1HT	Ceramic	0.01 µF
R400	ERJ3GEY0R00	Carbon	0 ohm 1/16W	C118	SK41A107ME	Tantalum	100 µF 10V
R401	ERJ3GEYJ473	Carbon	47 ohms 1/16W	C119	YGM1F104Z1ET	Ceramic	0.1 µF
R402	ERJ6GEYJ102	Carbon	1K ohms 1/16W	C120	YWSK51A106MA	Tantalum	10 µF 10V

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
C121	YGM1B103K1HT	Ceramic	0.01 μ F	C196	YGM1F105Z1AT	Ceramic	1 μ F
C122	YGM1F104Z1ET	Ceramic	0.1 μ F	C197	YGM1F104Z1ET	Ceramic	0.1 μ F
C123	YWSK41A476MC	Tantalum	47 μ F 10V	C202	F3H0J2260003	Tantalum	22 μ F 6.3V
C124	YGM1F104Z1ET	Ceramic	0.1 μ F	C203-207	YGM1F104Z1ET	Ceramic	0.1 μ F
C125-127	YGM1F104Z1ET	Ceramic	0.1 μ F	C209	YGM1C330J1HT	Ceramic	33 pF
C128	F3H0J2260003	Tantalum	22 μ F 6.3V	C210,211	YGM1F104Z1ET	Ceramic	0.1 μ F
C129	YWSK41A476MC	Tantalum	47 μ F 10V	C213-216	YGM1F104Z1ET	Ceramic	0.1 μ F
C131,133	YWSK41A476MC	Tantalum	47 μ F 10V	C219	GRM9CH101J5H	Ceramic	100 pF
C134	F3H0J2260003	Tantalum	22 μ F 6.3V	C221	YGM1C220J1HT	Ceramic	22 pF
C135	YWSK41A476MC	Tantalum	47 μ F 10V	C222	YGM1C040C1HT	Ceramic	4 pF
C136	YWRVP1C100M	Electrolytic	10 μ F 16V	C223	YGM1F104Z1ET	Ceramic	0.1 μ F
C137,138	YGM1F104Z1ET	Ceramic	0.1 μ F	L1,3	G1C390J00001	Coil	39 μ H
C139	YWSK51A106MA	Tantalum	10 μ F 10V	L6	G1C4R7J00002	Coil	4.7 μ H
C140	YGM1F104Z1ET	Ceramic	0.1 μ F	L2,5	ELJFC4R7MF	Coil	4.7 μ H
C141	F3H1A2260003	Tantalum	22 μ F 10V	L7,8	ELJFC4R7MF	Coil	4.7 μ H
C142,143	YGM1C470J1HT	Ceramic	47 pF	L9,10	ELJFC5R6MF	Coil	5.6 μ H
C144	GRM9CH150J5H	Ceramic	15 pF	X1	H0J120500001	Crystal Oscillator	
C145	YGM1F104Z1ET	Ceramic	0.1 μ F	X2,4	YWDX28R636A	Crystal Oscillator	
C146	YGM1F105Z1AT	Ceramic	1 μ F	FL1	YWNL4532S3R6	Filter	
C147	YWSK51A106MA	Tantalum	10 μ F 10V	FL2	YWCY4W072	Filter	
C148	YGM1F104Z1ET	Ceramic	0.1 μ F	TP1-4	YWRCT2125TPV	Test-Pin	
C149	YWSK51A106MA	Tantalum	10 μ F 10V	P1,2	K1MR70B00002	70-pin Connector	
C150	SK41C336MC	Tantalum	33 μ F 16V	P3	K1JE50B00001	50-pin Connector	
C151	YGM1C020C1HT	Ceramic	2 pF	P5	PANB1A061	12-pin Connector	
C152	F3H0J2260003	Tantalum	22 μ F 6.3V				
C153,154	YGM1C470J1HT	Ceramic	47 pF	POWER BOARD			
C155	GRM9CH150J5H	Ceramic	15 pF				
C156,157	YGM1C100D1HT	Ceramic	10 pF	PCB6 (RTL)	YWWWE600PKB2A	Printed Circuit Board Assy	
C158	YGM1F104Z1ET	Ceramic	0.1 μ F	U1	C0BBBA000024	IC	
C159	YWSK51A106MA	Tantalum	10 μ F 10V	U2	MC74HC161AF	IC	
C160	YGM1F104Z1ET	Ceramic	0.1 μ F	U3	MC74HC4046AF	IC	
C161	F3H0J2260003	Tantalum	22 μ F 6.3V	U4	C0ABAA000001	IC	
C162	YWSK51A106MA	Tantalum	10 μ F 10V	U5,6	YWMB3782PF	IC	
C163	SK41C336MC	Tantalum	33 μ F 16V	U7	C0JBAE000004	IC	
C164	YGM1C020C1HT	Ceramic	2 pF	U8	C0BBBA000024	IC	
C165	GRM9CH151J5H	Ceramic	150 pF	Q1	B1DCCG000001	Transistor	
C166	YGM1C560J1HT	Ceramic	56 pF	Q2	2SD1819-QRS	Transistor	
C167-170	YWSK51A106MA	Tantalum	10 μ F 10V	Q3	2SB1218ALL	Transistor	
C171	SK41C336MC	Tantalum	33 μ F 16V	Q4	2SB07660HL	Transistor	
C172	F3H1A2260003	Tantalum	22 μ F 10V	Q5	2SD1819-QRS	Transistor	
C173	YGM1C020C1HT	Ceramic	2 pF	Q6	2SJ132Z-T1	Transistor	
C174	F3H1A2260003	Tantalum	22 μ F 10V	Q7	2SD1819-QRS	Transistor	
C176-178	YGM1F104Z1ET	Ceramic	0.1 μ F				
C181,182	YGM1F104Z1ET	Ceramic	0.1 μ F				
C186,188	YGM1F104Z1ET	Ceramic	0.1 μ F				
C187	SK31A475KRA	Tantalum	4.7 μ F 10V				
C189	YWSK40J686MC	Tantalum	68 μ F 6.3V				
C190,191	YGM1F104Z1ET	Ceramic	0.1 μ F				
C192	GRM9CH150J5H	Ceramic	15 pF				
C193-195	YGM1F104Z1ET	Ceramic	0.1 μ F				

REF. NO.	PART NO.	DESCRIPTION		REF. NO.	PART NO.	DESCRIPTION	
Q8	2SB1218ALL	Transistor		R44	ERJ3RHD103V	Metal	10K ohms 1/16W
Q9	B1BCGC000001	Transistor		R45	ERJ3GEYJ330	Carbon	33 ohms 1/16W
Q10	2SD1819-QRS	Transistor		R46	ERJ3RHD202V	Metal	2K ohms 1/16W
Q11	2SJ132Z-T1	Transistor		R47	ERJ3RHD123V	Metal	12K ohms 1/16W
Q12	2SD1819-QRS	Transistor		R48	ERJ3RHD103V	Metal	10K ohms 1/16W
Q13	2SB1218ALL	Transistor		R50	ERJ3GEYJ103	Carbon	10K ohms 1/16W
Q14	2SD1819-QRS	Transistor		R51	ERJ3GEYJ470	Carbon	47 ohms 1/16W
Q15	2SB1218ALL	Transistor		R52	ERJ3RHD303V	Metal	30K ohms 1/16W
Q16-18	2SJ132Z-T1	Transistor		R53	ERJ3RHD203V	Metal	20K ohms 1/16W
Q19	B1BCGC000001	Transistor		R54	ERJ3RHD103V	Metal	10K ohms 1/16W
Q20	2SD1819-QRS	Transistor		R55	ERJ3GEYJ103	Carbon	10K ohms 1/16W
Q21	2SD1819-QRS	Transistor		R57-59	ERJ3GEYJ181	Carbon	180 ohms 1/16W
Q22,23	2SB1218ALL	Transistor		R60	ERJ3RHD473V	Metal	47K ohms 1/16W
Q24	2SD1819-QRS	Transistor		R61	ERJ3RHD302V	Metal	3K ohms 1/16W
Q25	2SK1284-Z-E1	Transistor		R62	ERJ3RHD103V	Metal	10K ohms 1/16W
Q26	B1DCCG000001	Transistor		R63	ERJ3GEYJ101	Carbon	100 ohms 1/16W
Q27	2SK1133-T1B	Transistor		R64	ERJ3RHD243V	Metal	24K ohms 1/16W
Q28	2SJ132Z-T1	Transistor		R65	ERJ3RHD223V	Metal	22K ohms 1/16W
Q29	2SD1819-QRS	Transistor		R66	ERJ3RHD103V	Metal	10K ohms 1/16W
Q30	2SB1218ALL	Transistor		R67	ERJ3GEYJ103	Carbon	10K ohms 1/16W
Q31	2SD1819-QRS	Transistor		R68	ERJ3GEYJ331	Carbon	330 ohms 1/16W
Q32	2SB12190WL	Transistor		R69	ERJ3GEYJ103	Carbon	10K ohms 1/16W
D2-8	YWSC80204R	Diode		R70,71	ERJ3GEYJ331	Carbon	330 ohms 1/16W
D10	YWSC80204R	Diode		R72	ERJ3GEYJ103	Carbon	10K ohms 1/16W
D11	MAZ508200L	Diode		R73	ERJ3RHD473V	Metal	47K ohms 1/16W
D12	YWMA3062MTX	Diode		R74	ERJ3RHD432V	Metal	4.3K ohms 1/16W
R1	ERJ3RHD163V	Metal	16K ohms 1/16W	R76,77	ERJ3RHD103V	Metal	10K ohms 1/16W
R2	ERJ3RHD822V	Metal	8.2K ohms 1/16W	R78	ERJ3GEYJ914	Carbon	910K ohms 1/16W
R13,14	ERJ3RHD103V	Metal	10K ohms 1/16W	R79	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R15	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R80	ERJ3GEYJ470	Carbon	47 ohms 1/16W
R16	ERJ3GEYJ332	Carbon	3.3K ohms 1/16W	R81,82	ERJ3GEYJ152	Carbon	1.5K ohms 1/16W
R17	ERJ3RHD153V	Metal	15K ohms 1/16W	R83,84	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R18	ERJ3RHD103V	Metal	10K ohms 1/16W	R85,86	ERJ3GEYJ473	Carbon	47K ohms 1/16W
R19-21	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R87	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W
R23	ERJ3GEYJ511	Carbon	510 ohms 1/16W	R88	ERJ3GEYJ102	Carbon	1K ohms 1/16W
R24	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R89	ERJ3GEYJ821	Carbon	820 ohms 1/16W
R25	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R90,91	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R26	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R92	ERJ3GEYJ680	Carbon	68 ohms 1/16W
R27	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R93	ERJ3GEYJ101	Carbon	100 ohms 1/16W
R28	ERJ3GEYJ223	Carbon	22K ohms 1/16W	R94	ERJ3GEYJ912	Carbon	9.1K ohms 1/16W
R29	ERJ3GEY0R00	Carbon	0 ohm 1/16W	R95	ERJ3GEYJ203	Carbon	20K ohms 1/16W
R30-32	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R96,97	ERJ3GEYJ623	Carbon	62K ohms 1/16W
R33	ERJ3GEYJ181	Carbon	180 ohms 1/16W	R98,99	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R34	ERJ3RHD182V	Metal	1.8K ohms 1/16W	R100	ERJ3GEYJ104	Carbon	100K ohms 1/16W
R35	ERJ3RHD243V	Metal	24K ohms 1/16W	R101	ERJ3GEYJ103	Carbon	10K ohms 1/16W
R36	ERJ3RHD302V	Metal	3K ohms 1/16W	R112	ERJ3GEYJ512	Carbon	5.1K ohms 1/16W
R37	ERJ3GEYJ102	Carbon	1K ohms 1/16W	R116	ERJ3GEYJ302	Carbon	3K ohms 1/16W
R38	ERJ3GEYJ472	Carbon	4.7K ohms 1/16W	R117	ERJ3GEYJ301	Carbon	300 ohms 1/16W
R41	ERJ3GEYJ103	Carbon	10K ohms 1/16W	R118	ERJ3RHD202V	Metal	2K ohms 1/16W
R42	ERJ3GEYJ470	Carbon	47 ohms 1/16W	R121	ERJ3RHD822V	Metal	8.2K ohms 1/16W

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
PREAMP. – SUB BOARD					
PCB8 (RTL)	WE600PKY1A	Printed Circuit Board Assy			
Q701	2SA15320CL	Transistor			
Q702	2SC39310YL	Transistor			
R701	EVM7JSW30B14	Variable Resistor 10K ohms			
R702	ERJ3GEYJ103	Carbon 10K ohms 1/16W			
R703	ERJ3GEYJ822	Carbon 8.2K ohms 1/16W			
R704	ERJ3GEYJ472	Carbon 4.7K ohms 1/16W			
R705	EVM7JSW30B14	Variable Resistor 10K ohms			
R706	ERJ3GEYJ103	Carbon 10K ohms 1/16W			
R707	EVM7JSW30B14	Variable Resistor 10K ohms			
R708	ERJ3GEYJ103	Carbon 10K ohms 1/16W			
C701	F3F1A1060001	Electrolytic 10 µF 10V			
DSP / ENCODER – SUB BOARD					
PCB9 (RTL)	WE300PKY1A	Printed Circuit Board Assy			
U424	C0JBAS000063	IC			
R412	ERJ3GEYJ102	Carbon 1K ohms 1/16W			
C224	F3F1A1060001	Electrolytic 10 µF 10V			
ACCESSARY PARTS / PACKAGING PARTS					
M41	△ YW7J1A256A	Operating Instruction			
M42	5G1A073A	Sheet			
M43	YWT050803	Polyethylene Bag			
M45	XZB26X40C05	Polyethylene Bag			
M46	0C1A044AB	Packing Assy			